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William D. Wiese
Jenkins & Gilchrist, P.C.

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ARTICLES

DEATH OF A MYTH: THE PATENTING OF INTERNET BUSINESS MODELS AFTER *STATE STREET BANK*

WILLIAM D. WIESE*

I. INTRODUCTION

The recent flurry of patents issued for Internet business models has left patentholders and competitors alike wondering exactly what uses such patents cover and whether or not the patents will stand up in court. Business models, or "methods of doing business," such as those claimed in the recently issued patents, had long been considered unpatentable under a judicially created exception to the Patent Act.¹ However, on July 23, 1998, in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*,² the United States Court of Appeals for the Federal Circuit gave its stamp of approval to the patenting of business methods and cleared the way for patenting methods of doing business on the Internet.

Although heralded as a revolutionary change in the court's view of patentable subject matter, in all likelihood the Federal Circuit's decision in *State Street Bank* will have little long-term effect on the patentability of Internet business models. Where a patent claims subject matter patentable under pre-*State Street Bank* requirements, it will be upheld. Where it does not, it will not be upheld. Part II of this Article provides background information about the Internet, the Patent Act, and Internet business models. Parts III, IV, and V examine the reasons why the seemingly important decision in *State Street Bank* will have few long-term consequences. First, although the business method exception was often mentioned in dicta, most courts ultimately cited another bar to patentability, such as lack of novelty or

* Mr. Wiese is an associate with Jenkins & Gilchrist, P.C., Austin, Texas. This Article includes the individual opinions of the author and does not necessarily reflect the opinion of the firm or its individual shareholders.

1. 35 U.S.C. §§ 1-376 (1994 & Supp. III 1997).

2. 149 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999).

obviousness, as the dispositive factor. Therefore, the business method exception never really existed.³ Second, even if one assumes that the business method exception was a legitimate doctrine, the United States Patent and Trademark Office (PTO) has recently relaxed the entire field of patentable subject matter for computer-related inventions. This change in the scope of patentable subject matter likely would have subsumed the business method exception, rendering it meaningless. Finally, the PTO and the courts must continue to evaluate business method patents under the patentability requirements of the Patent Act. Thus, the PTO will probably reject many claims for Internet business models, and courts will continue to invalidate claims for such models, just as they did when the business method exception was alive.

II. BACKGROUND

A. *The Internet*

The Internet⁴ was originally developed in the 1960s by the Department of Defense as a decentralized, packet-switched network intended to facilitate communication in the United States in the event of a nuclear attack.⁵ It is a cooperative venture regulated by several volunteer agencies but owned by no one.⁶ To date, it connects more than two million computers to over fifty-eight million users worldwide.⁷

The best known and most dynamic category of communication over the Internet is the World Wide Web ("Web"), which allows users to search for

3. Other commentators have made similar arguments. See, e.g., Rinaldo Del Gallo III, *Are "Methods of Doing Business" Finally Out of Business as a Statutory Rejection?*, 38 IDEA 403, 435 (1998) ("[I]t is clear that the 'business method exception' is now and has always been a chimera."); Mary S. Kakefuda, Recent Decision, *Patent Law—Determining When a Process Invention Contains a Mathematical Algorithm and When It Falls Within Statutory Subject Matter—In Re Schrader*, 68 TEMP. L. REV. 507, 527 n.171 (1995) ("These cases show that the 'method of doing business' exception is really a disguised lack of novelty argument and, therefore, is a § 102 issue, and not a § 101 statutory subject matter issue.").

4. Throughout this Article, the term Internet (with an uppercase "I") is used in its most general sense, referring to the collection of all interconnected networks that use the TCP/IP protocols and that evolved from the ARPANET. The internet (with a lowercase "i") refers to a network comprising two or more networks. See Matisse Enzel, *Glossary of Internet Terms*, 75 MICH. B.J. 527, 528-29 (1996).

5. For a detailed, though somewhat one-sided description of the Internet's history, means of accessing the Internet, and methods of communication over the Internet, see ACLU v. Reno, 929 F. Supp. 824, 830-49 (E.D. Pa. 1996).

6. See *id.* at 831.

7. See *Shorts*, COMPUTERWORLD, Dec. 15, 1997, at 8.

and retrieve information stored in remote computers all over the world.⁸ Documents on the Web, which are known as Web pages or Web sites, “contain information stored in a variety of formats, including text, still images, sounds, and video.”⁹ Web sites often enable viewers to communicate with the site’s owner, and may also contain links to other documents within the site or to other related sites. In short, the Web brings together a wide array of resources linked together on a worldwide basis, thus providing a transnational channel for the distribution of information.

A highly profitable area of Internet usage is electronic commerce.¹⁰ It is projected that Web-based transactions in the United States will grow from the \$13 billion recorded in 1998 to \$108 billion by 2003.¹¹ One researcher projected that ninety-eight percent of corporate America would be on the Internet by the end of 1999.¹² Because of this enormous growth, many companies are willing to go to any length to protect their methods of doing business online. The most recent trend has been to seek patent protection for new Internet business models.

B. The Patent Act

To qualify as patentable statutory subject matter under section 101 of the Patent Act, an invention must be a “new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”¹³ An invention relating to a method of doing business appears to

8. See *ACLU*, 929 F. Supp. at 836.

9. *Id.* (describing the World Wide Web as a series of documents containing information stored in a “variety of formats, including text, still images, sounds, and video,” stored in different computers all over the Internet).

10. “E-commerce encompasses services which allow businesses to sell products to customers via the Internet through the use of virtual shopping baskets, order forms, and so forth.” *Sprint Corp. v. DeAngelo*, 12 F. Supp. 2d 1188, 1192 n.5 (D. Kan. 1998).

11. See NetServe, Inc., *E-commerce Statistics and Forecasts* (visited Jan. 26, 2000) <<http://www.netserveinc.com/market.htm>>.

12. See Gail G. Grant, *Business Models for the Internet and New Media*, in *REPRESENTING THE NEW MEDIA COMPANY* 49, 57 (PLI Pats., Copyrights, Trademarks, & Literary Prop. Course Handbook Series No. 505, Jan. 1998) (citing research by Straightline International, Inc.).

13. 35 U.S.C. § 101 (1994) provides: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” See also John A. Burtis, Comment, *Towards a Rational Jurisprudence of Computer-Related Patentability in Light of In re Alappat*, 79 MINN. L. REV. 1129, 1131 & n.10 (1995):

Congress enacted the first Patent Act in 1793, principally authored by Thomas Jefferson. [See Patent Act of 1793, ch. 11, 1 Stat. 318 (codified as amended at 35 U.S.C. §§ 1-376 (1994 & Supp. III 1997)).] The Act extended patent protection to “any new and useful art, machine, manufacture or composition of matter, or any new or useful improvement [thereof].” [*Id.* at 319.] This broad language staking out the territory of patentable subject

qualify as a process under the Act. However, "process" is circularly defined in section 100(b) as a "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter or material."¹⁴ The statute therefore provides little insight into Congress's intended scope for process patents. Nevertheless, the legislative history of section 101 demonstrates that Congress intended the section to be interpreted broadly such that "anything under the sun that is made by man" is included in statutory subject matter.¹⁵

Assuming that the invention meets this rather lax subject matter requirement, it must then overcome other hurdles to patentability under the Patent Act, such as novelty¹⁶ and nonobviousness,¹⁷ issues which will be

matter remained unchanged through successive Patent Acts in 1836, 1870, and 1874. In 1952, when Congress recodified this provision into 35 U.S.C. § 101, the present standard for determining patentable subject matter, the only change made was replacing the word "art" with the word "process." [S. REP. NO. 82-1979, pt. 2, at 34 (1952); H.R. REP. NO. 82-1923, pt. 2, at 189 (1952), reprinted in 1952 U.S.C.C.A.N. 2394, 2398-99.]

See also Kakefuda, *supra* note 3, at 511 n.35 ("[S]ee also *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 476-77, 181 U.S.P.Q. (BNA) 673, 676 (1974) (discussing requirements for patentability); William T. Goglia, Annotation, *Supreme Court's Views as to What Is Patentable Subject Matter Under Federal Law as 'Process,' 'Machine,' 'Manufacture,' or 'Composition of Matter,'* 65 L. ED. 2D 1197, 1199-1202 (1981) (discussing what constitutes patentable subject matter).").

14. 35 U.S.C. § 100(b) (1994). The term "process" has been a category frequently redefined by the Supreme Court. For instance, it has been defined as "an operation," "a system or method," "a method for securing the performance of a function by a means which has never occurred in nature," or "a useful art or method." Kakefuda, *supra* note 3, at 511 n.36 (citing Goglia, *supra* note 13, at 1204).

15. S. REP. NO. 82-1979, pt. 2, at 34; H.R. REP. NO. 82-1923, pt. 2, at 189.

16. Section 102 states:

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

discussed later.¹⁸ Once satisfied that all requirements have been met, the PTO grants a patent, which gives the inventor the right to exclude others from making, using, selling, or offering to sell the patented invention for a limited time.¹⁹ In exchange for this right, however, the inventor must disclose his or her invention to the world. Because of the implications of acquiring a patent, inventors should consider alternative forms of protection available under copyright or trade secret laws.

1. Patent Protection as an Alternative to Copyright Protection

A copyright is a property right granted by statute to the originator of artistic and literary works.²⁰ Under the Copyright Act, the copyright owner has the exclusive right to make copies of the work²¹ but has no right to preclude others from using the ideas or information revealed by the work.²²

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

35 U.S.C. § 102.

17. Section 103, in pertinent part, states:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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 negated by the manner in which the invention was made.

....

(c) Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

35 U.S.C. § 103 (Supp. III 1997).

18. See discussion *infra* Part V.A, C.

19. See U.S. CONST. art. I, § 8, cl. 8. Three types of patents currently exist: utility patents, design patents, and plant patents. Utility patents, by far the most common, cover new, nonobvious, and useful machines, articles of manufacture, compositions of matter, and processes by protecting the utility of the claimed invention for 20 years from the date on which the patent application was filed. See 35 U.S.C. § 154(a)(2) (1994). Design patents protect the unique appearance or design of articles of manufacture for a term of 14 years. See *id.* §§ 171-73. Plant patents protect certain new asexually reproduced plant varieties for 20 years from the patent application's filing date. See *id.* §§ 161-64.

20. See 17 U.S.C. § 102 (1994).

21. See *id.* § 106(1). In addition to the right to make copies, copyright protection also allows the owner to control derivative works such as plays, motion pictures, or other adaptations of the basic work. See *id.* § 106(2).

22. See *id.* § 102(b).

The protection afforded by the Act attaches as soon as the work is recorded in some concrete form.²³ Consequently, in most cases the work is not submitted for registration.²⁴ Where registration is undertaken, the requirements are minimal. For example, an author of a software program may register a copyrighted work by submitting a simple application, a nominal fee, and a disk with the code or a certain number of pages of written code to the Copyright Office.²⁵ In most cases, protection under the Copyright Act terminates seventy years after the death of the author.²⁶

There are several important distinctions between the processes of securing copyrights and patents, and the protections afforded thereby. First, the process of securing a patent takes far longer, typically two to four years, and is much more expensive than the process of securing a copyright. Second, unlike patent infringement, which can occur even under conditions of innocent, independent development,²⁷ copyright infringement requires another person's wrongful conduct (e.g., copying or stealing). Third, patents are more effective in protecting intellectual property than copyrights because they protect the essence of a commercially valuable idea and not merely its specific, easily circumvented expression.²⁸ Finally, the term for copyright protection, the life of the author plus seventy years, surpasses the term for

23. See *id.* § 102(a) ("Copyright protection subsists . . . in original works of authorship *fixed in any tangible medium of expression*" (emphasis added)).

24. Although registration of copyright is "permissive," 17 U.S.C. § 408(a), the Copyright Act provides the following incentives for timely registration: (1) early registration ensures *prima facie* proof of validity of the copyright, see *id.* § 410(c); (2) for works of U.S. origin, registration is a prerequisite to an infringement action, see *id.* § 411(a); and (3) statutory damages and attorney's fees may be awarded only if registration is made prior to the commencement of the infringement suit, see *id.* § 412.

25. See *id.* § 409.

26. See 17 U.S.C. § 302(a) (1994) ("Copyright in a work created on or after January 1, 1978, subsists from its creation and, except as provided in the following subsections, endures for a term consisting of the life of the author and fifty years after the author's death."). Under the Sonny Bono Copyright Term Extension Act, the duration of copyright in a work created after January 1, 1978 is the life of the author plus 70 years. For works created prior to January 1, 1978 or works owned by corporations, copyright protection lasts 75 years from the date of the original copyright. See Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298, 112 Stat. 2827 (1998) (amending, *inter alia*, § 302(a)) (codified as 17 U.S.C. § 302(a) (Supp. IV 1998)).

27. See *SRI Int'l, Inc. v. Advanced Tech. Lab., Inc.*, No. 93-1074, 1994 WL 712487, at *1-*2 (Fed. Cir. Dec. 21, 1994) ("[A]n innocent infringer is no less liable for patent infringement than a willful infringer. The culpability of the infringer comes into play, if at all, in determining the amount of damages owed the patentee. Indeed, a finding of willfulness does not require a court to increase damages.").

28. "A patent is much more powerful because it doesn't require any copying' Whereas a copyright would cover the source code itself for a spreadsheet application, for example, a patent would cover the notion of a spreadsheet application, regardless of similarities or differences in the underlying source code." Beth Lipton, *Floodgates Open for Patent Cases*, CNET NEWS.COM (Aug. 28, 1998) <<http://news.cnet.com/news/0-1005-200-332689.html>>.

patent protection, which expires twenty years after the application was filed.²⁹

To illustrate the distinction by way of example,³⁰ if an inventor created a novel business method and subsequently described the work in a pamphlet, he would have the exclusive right under copyright law to distribute the pamphlet,³¹ but could not prevent others from using the method described in the pamphlet.³² Similarly, if he developed a computer program for a business system, copyright law would prevent others from copying the expression contained in the program, but would not prevent them from practicing the invented method or from independently developing a computer program that could perform the same method of doing business.³³ A patent, by contrast, would protect the underlying method in each case.

2. Patent Protection as an Alternative to Trade Secret Protection

A trade secret is “an internal business practice that is kept private”³⁴ and may consist of “any formula, pattern, device or compilation of information which is used in one’s business, and [provides] . . . an advantage over competitors who do not know or use it.”³⁵ The only subject matter requirement for a trade secret is that it must be a secret.³⁶ A product or process in the public domain cannot subsequently be appropriated as one’s

29. Compare 17 U.S.C. § 302 (Supp. IV 1998) (copyright term) with 35 U.S.C. § 154 (1994) (patent term).

30. See Michael L. Fuelling, *Manufacturing, Selling, and Accounting: Patenting Business Methods*, 76 J. PAT. & TRADEMARK OFF. SOC’Y 471, 475 (1994) (providing brochure and computer program examples).

31. See *id.*; 17 U.S.C. § 106(3) (1994).

32. See Fuelling, *supra* note 30, at 475 & n.28 (“17 U.S.C. § 102(b); [s]ee also *Briggs v. New Hampshire Trotting & Breeding Ass’n, Inc.*, 191 F. Supp. 234, 128 U.S.P.Q. (BNA) 465 (D.N.H. 1960) (holding that the author of a brochure entitled ‘The Fabulous 4-7 The Incomparable 5-9 Big-Bonus Pari-Mutuel Wagering Selections’ was not entitled to the exclusive use of the betting system described in the brochure).”).

33. See Fuelling, *supra* note 30, at 475; 17 U.S.C. § 102(b).

34. Fuelling, *supra* note 30, at 473.

35. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 474, 181 U.S.P.Q. (BNA) 673, 676 (1974) (quoting RESTATEMENT OF TORTS § 757 cmt. b (1939)); see also *Water Servs., Inc. v. Tesco Chems., Inc.*, 410 F.2d 163, 171, 162 U.S.P.Q. (BNA) 321, 327 (5th Cir. 1969) (quoting RESTATEMENT OF TORTS § 757 cmt. b, at 5 (1939)):

[A trade secret] may be a formula for a chemical compound, a process of manufacturing, treating or preserving materials, a pattern for a machine or other device, or a list of customers. . . . Generally it relates to the formula for the production of an article. It may, however, relate to the sale of goods or to other operations in the business, such as a code for determining discounts, rebates or other concessions in a price list or catalogue, or a list of specialized customers, or a method of bookkeeping or other office management.

36. See *Cataphote Corp. v. Hudson*, 422 F.2d 1290, 1293, 165 U.S.P.Q. (BNA) 41, 44 (5th Cir. 1970).

own trade secret.³⁷ Therefore, to retain a trade secret, a business must make contractual agreements with its employees, contractors, and agents that preclude those persons from disclosing the trade secret. In essence, trade secret law focuses on conduct (i.e., retaining the technology as a secret), not on the technology (i.e., its novelty).³⁸

Once again, there are several significant distinctions between the protection afforded to trade secrets and that afforded by patents. First, while a patent is "totally exclusionary for the period for which [it is] granted," a "trade secret is protected only so long as competitors fail to duplicate it by legitimate independent research."³⁹ Second, "[a] trade secret law . . . does not offer protection against discovery by fair and honest means, such as by . . . so-called reverse engineering, that is, by starting with the known product and working backwards to divine the process which aided in its development or manufacture."⁴⁰ Third, as distinguished from a patent, a trade secret need not be essentially new, novel, or unique.⁴¹ "These requirements are essential to patentability because a patent protects against unlicensed use of the patented device or process even by one who discovers it properly through independent research."⁴² By contrast, trade secret protection is "merely [protection] against breach of faith and reprehensible means of learning another's secret. For this limited protection it is not appropriate to require also the kind of novelty and invention which is a requisite of patentability."⁴³ In short, a "trade secret is protected by being kept secret[, and a] patent is protected after being

37. "Of course, . . . a non-secret item may become the subject of a process not theretofore generally known and therefore secret." *Id.* at 1293 n.2, 165 U.S.P.Q. (BNA) at 44 n.2.

38. See Fuelling, *supra* note 30, at 474; see also *Cataphote*, 422 F.2d at 1293, 165 U.S.P.Q. (BNA) at 43 (citing RESTATEMENT OF TORTS § 757 cmt. a, at 4 (1939)):

The patent laws establish a monopoly for the purpose of encouraging invention and the arts. Protection of trade secrets is a form of protection against use by others, focusing upon inequitable use by another—by breach of contract not to reveal, or abuse of confidence, or impropriety in obtaining the secret.

39. *Water Servs.*, 410 F.2d at 171, 162 U.S.P.Q. (BNA) at 327.

40. *Kewanee Oil*, 416 U.S. at 476, 181 U.S.P.Q. (BNA) at 676.

41. See 2 CALLMAN, UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES § 14.07, at 36 (4th ed. 1996) ("As distinguished from a patentable invention, a trade secret need not be . . . novel or unobvious . . .").

42. RESTATEMENT OF TORTS § 757 cmt. b, at 7 (1939). "The patent monopoly is a reward to the inventor. But such is not the case with a trade secret. Its protection is not based on a policy of rewarding or otherwise encouraging the development of secret processes or devices." *Id.*

43. *Id.*; see also *Cataphote Corp. v. Hudson*, 422 F.2d 1290, 1294 n.3, 165 U.S.P.Q. (BNA) 41, 44 n.3 (5th Cir. 1970):

Though it need not do so, a trade secret may possess qualities of novelty or inventiveness but not rise to the level of patentable invention. Or the trade secret may be patentable and the owner seek to protect it as a trade secret rather than spread it on the records as a patent.

spread on the public records for all to see.”⁴⁴

In view of the nature of trade secrets, some business models lend themselves better to protection as trade secrets than others.⁴⁵ Generally, methods that are purely internal to a business or that can be tightly controlled by the business are well suited for protection as trade secrets. For example, the chemical processes involved in refining oil are well known, but the optimum control parameters for many of the processes are not.⁴⁶ Oil refining companies often enter into trade secret agreements with the engineers who develop such parameters.⁴⁷ Similarly, mathematical formulas used in manufacturing processes, such as equations for optimal batch sizes and ingredients, may be protected.⁴⁸ Trade secret protection is also often utilized in the accounting field; for instance, stock valuation methods may be protected.⁴⁹

By contrast, selling methods are anathema to trade secret protection. By their very nature, selling methods involve parties outside the business who are exposed to the methods. As participants in the transaction, buyers must know the general nature of the deal and methodology used to carry it out.⁵⁰ Additionally, a goal of most sellers is to distribute products or services widely, not to limit their distribution. Consequently, trade secret protection is probably not the most practical form of protection for selling methods.⁵¹ For this reason, developers of Internet business methods, many of which relate to the sale of goods, have found patents to be the preferred form of protection for their intellectual property.

44. *Cataphote*, 422 F.2d at 1293, 165 U.S.P.Q. (BNA) at 44.

45. *See, e.g.*, Fuelling, *supra* note 30, at 473-74.

46. *See id.* at 474.

47. *See id.*

48. *See id.* If a company requires developers of such formulas to enter into confidentiality agreements, it would even be possible to keep the formula secret from those who operate the equipment by setting up a computer program whereby a user merely enters data. *See id.*

49. *See id.* Interestingly, the case that confirmed the patentability of business methods, *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999), involved a patent for an accounting-type function (a stock selection technique), and many of the patentee's competitors have argued that the patent is redundant because most similar functions are protected by "trade-secrets law and a veil of silence." Pui-Wing Tam, *What's Next? Getting Patents for Cold Calls?*, WALL ST. J., Nov. 2, 1998, at C1.

50. *See* Fuelling, *supra* note 30, at 474.

51. *See id.* For a detailed comparison of patent and trade secret protection, see Gordon L. Doerfer, *The Limits on Trade Secret Law Imposed by Federal Patent and Antitrust Supremacy*, 80 HARV. L. REV. 1432, 1447-56 (1967).

C. Internet Business Models

Manufacturing, selling, and accounting are prototypical categories for business methods.⁵² Manufacturing and accounting functions are primarily internal functions of the business, and with proper precaution and diligence can be protected as trade secrets. By contrast, sales functions involve a large number of people outside the business who require access to information about the business's product or service in order to participate in the selling process.⁵³ The Internet was created for the mass distribution of information, and is therefore an ideal medium for selling.⁵⁴ However, the involvement of the masses makes protection of business methods under copyright or trade secret laws extremely difficult. Consequently, many companies are pursuing patent protection for their Internet sales-related business models.

Companies that obtain patents for online business models can preclude potential competitors from entering the market, and innovative (or lucky) companies can even end up owning patents on very basic business models whose usefulness extends across industry lines.⁵⁵ Armed with a patent, patentholders may force competitors to license the business models, which may hamper competition.⁵⁶ Further, many entrepreneurs seek patent protection for their business models to demonstrate to potential investors that their enterprise will not be copied, or because a patent is a "major source of . . . leverage" when dealing with large companies.⁵⁷ In light of the enormous market potential promised by the Internet, there is likely to be an

52. See Fuelling, *supra* note 30, at 473.

53. See *id.*

54. See *supra* text accompanying note 5.

55. In a famous case, Compton New Media received a patent in 1994 covering a commonly used method of searching and receiving sound, text, and video in computer programs. The company publicized its intention to charge anyone using such technology (basically the entire industry), and the "ensuing uproar" was so great that "Patent Commissioner Bruce Lehman, in a rare move, re-examined the patent himself and invalidated it." James Kim, *Patent He Seeks Could Affect All Web Browsers*, USA TODAY, Mar. 26, 1996, at 1B.

56. For example, U.S. Patent No. 5,790,793 (issued Aug. 4, 1998), held by NETdelivery, covers a "method of communicating between computers [by] sending a message over a network, said message including at least one reference to a predetermined location at a first computer system; receiving said message at a second computer system; and decoding said message by retrieving data from said predetermined location automatically." Paul Festa, *Patent Could Push Firms' Buttons*, CNET NEWS.COM (Aug. 21, 1998) <<http://www.news.com/News/Item/0.25.255562.00.html>>. This claim translates into "push" technology, a technology currently in wide use by, among others, Netscape Communications' Netcaster, Microsoft's Channel Definition Format, and Marimba's Castanet. NETdelivery formulated a licensing program and planned to ask infringing companies to "pony up." *Id.*

57. Lipton, *supra* note 28. Netcentives, see *infra* text accompanying note 76, announced that it received \$17.25 million in new funding as a result of its newly issued patent. See Lipton, *supra* note 28.

onslaught of patent infringement suits in this area. Not surprisingly, some disputes have already flared into lawsuits.⁵⁸

United States patents have already issued for a wide variety of Internet business methods,⁵⁹ including:

a. *Internet Search Method*. A method patented⁶⁰ by Lycos, called "WiseWire," "helps in searching for information on the Internet." "[I]t lets . . . users read and rate documents, learns from their responses, and then automatically delivers fresh information."⁶¹ WiseWire also determines the most popular Internet sites within a particular category and loads that category with dynamic content.⁶²

b. *Delivery of Postage*. An electronic postage system, developed by Pitney Bowes Corporation for buying postage stamps over the Internet, was the first to make it through the U.S. Post Office's arduous screening process.⁶³ The patented⁶⁴ technology allows users to download postage from the Internet and print it directly onto envelopes using software, a small piece of hardware, and a standard printer.⁶⁵

c. *Internet Server Access Control and Monitoring Systems*. A method has been developed by Open Market, Inc. for monitoring and analyzing how users browse through content on a Web site, thereby allowing businesses to market more effectively to buyers based upon viewing patterns.⁶⁶ The system can also be used to limit access to specific content, such as subscription or account information, or an organization's internal information.⁶⁷

58. For example, E-Data Corp. sued 21 companies, including Adobe Systems, CompuServe, and McGraw-Hill, claiming infringement of its broad patent on methods of selling software electronically. A court dismissed the claim and chastised E-Data for expanding "the scope of its patent beyond that which was intended." *Interactive Gift Express, Inc. v. CompuServe, Inc.*, 47 U.S.P.Q.2d (BNA) 1797 (S.D.N.Y. 1998); see also *infra* text accompanying notes 192 and 193. Nevertheless, E-Data notified 150 other companies that they were infringing the patent. See Kim, *supra* note 55.

59. See Tim Clark, *Who's Got the Patent?*, CNET NEWS.COM (Aug. 26, 1998) <<http://news.cnet.com/news/0-1003-200-332600.html>> (providing a sampling of issued e-commerce patents).

60. See U.S. Patent No. 5,867,799 (issued Feb. 2, 1999).

61. See *Lycos Gets Patent for WiseWire*, CNET NEWS.COM (Aug. 5, 1998) <<http://news.cnet.com/news/0-1005-200-331942.html>>.

62. See *id.*

63. See *Pitney Bowes Tests Net Postage*, CNET NEWS.COM (Nov. 11, 1998) <<http://news.cnet.com/news/0-1007-200-335238.html>>.

64. See, e.g., U.S. Patent No. 5,625,694 (issued Apr. 29, 1997); U.S. Patent No. 5,781,438 (issued July 14, 1998); U.S. Patent No. 5,987,441 (issued Nov. 16, 1999).

65. See *Pitney Bowes*, *supra* note 63.

66. See U.S. Patent No. 5,708,780 (issued Jan. 13, 1998). The claimed system may also cover digital certificates, but not cookies, to track users on a Web site. See Clark, *supra* note 59.

67. See U.S. Patent No. 5,708,780 (issued Jan. 13, 1998).

d. *Electronic Shopping Carts*. Another Open Market patent provides for "electronic shopping carts" in which online merchants allow their customers to accumulate items for purchase before checking out.⁶⁸ This patent also details the passing of payment and purchase information through a URL.⁶⁹ The technology allows digital offers to be distributed on the Web via e-mail, CD-ROMs, and even over broadcast media.⁷⁰

e. *Secure Online Payments*. The third in the trilogy⁷¹ of Open Market patents is for a system that provides for secure, real-time payment using credit and debit cards over the Internet, enabling E-merchants to verify credit card information in several seconds while customers wait online.⁷²

f. *Name-Your-Price Reverse Auctions*. A method patented by Priceline.com, L.L.C. allows buyers to make an offer to purchase goods or services and for "sellers . . . to bind a buyer to a contract based on the buyer's purchase offer."⁷³

g. *Pay-Per-View Ads*. A system patented by CyberGold, Inc. for online "attention brokerage"⁷⁴ "allows [users] to earn money by clicking on banner advertisements and corporate Web sites."⁷⁵

h. *Online Interactive Frequency and Award Redemption Programs*. A set of systems, procedures, and methods patented by Netcentives, Inc. provides for online rewards programs in which consumers shop online, earn points or other units of value for their purchases, then redeem those points online for items from an award catalog.⁷⁶ The system is being used for tracking and awarding frequent flyer mileage for online purchases.⁷⁷

i. *Method for Downloading Videos or Software*. Sightsound.com received "two patents"⁷⁸ for the method of selling digital audio and video files"

68. U.S. Patent No. 5,715,314 (issued Feb. 3, 1998).

69. *See id.*

70. *See id.*

71. *See* John Evan Frook, *Open Market Receives Internet Payment Patent*, INTERNETWEEK ONLINE (Mar. 3, 1998) <<http://www.comweek.com/news/news0303-4.htm>>; Gabrielle Jonas, *Open Market Shares Soar on Patent News*, TECHWEB (Mar. 3, 1998) <<http://www.techweb.com/wire/finance/story/INV19980303S0003>>.

72. *See* U.S. Patent No. 5,724,424 (issued Mar. 3, 1998).

73. U.S. Patent No. 5,794,207 (issued Aug. 11, 1998).

74. *See* U.S. Patent No. 5,794,210 (issued Aug. 11, 1998).

75. Matt Richtel, *Are Patents Good or Bad for Business Online?*, CYBER L.J. (Aug. 28, 1998) <<http://www.nytimes.com/library/tech/98/08/cyber/cyberlaw/28law.html>>.

76. *See* U.S. Patent No. 5,774,870 (issued June 30, 1998).

77. *See* Clark, *supra* note 59.

78. *See* U.S. Patent No. 5,191,573 (issued Mar. 2, 1993); U.S. Patent No. 5,675,734 (issued Oct. 7, 1997).

over the Internet.⁷⁹ The company, which calls itself a “download service provider,” believes “its patents also cover any ‘player’ software that charges for each download.”⁸⁰

j. *Internet Keyword Search Service*. Network, L.L.C. received a patent for a method of searching the Internet whereby users type words into the browser’s address bar where they would ordinarily type a URL.⁸¹ For example, a user could type “Chevy” to get to Chevrolet’s Web site in lieu of typing the much lengthier Web address <http://www.chevrolet.com>.

k. *Offline Advertising Delivery*. Juno Online Services, L.P. received patents for a system that displays and updates interactive ads on a remote user’s computer after the user has disconnected from the Internet⁸² and an electronic mail system for displaying advertisements received from a remote system at a local computer while the local computer is offline.⁸³

While the range of online business methods receiving patents is noteworthy, it is the pace at which these patents are being issued that is staggering. Since patent approval generally takes two to four years, the increase of Internet commerce activity in late 1995 may account for this recent flood of new patents. In light of the frenzied pace of Internet commerce and the suboptimal alternative forms of protection available, it is likely that the number of patents sought for Internet business models will continue to rise.

III. DEATH OF A MYTH

A. *The Myth of the Business Method Exception*

1. Origin of the Business Method Exception

The state of the law regarding the patentability of methods of doing business had been unsettled for many years. For example, in an 1869 case, *Ex parte Abraham*, the Commissioner of Patents suggested in dicta that bookkeeping methods were unpatentable.⁸⁴ By contrast, in a 1912 case, *In re Tallmadge*, the court suggested that novel bookkeeping systems were

79. Jennifer Sullivan, *Patented Listening Pleasure*, WIRED NEWS (Oct. 1, 1998) <<http://www.wired.com/news/news/business/story/15346.html>>.

80. *Id.*

81. See U.S. Patent No. 5,764,906 (issued June 9, 1998).

82. See U.S. Patent No. 5,838,790 (issued Nov. 17, 1998).

83. See U.S. Patent No. 5,809,242 (issued Sept. 15, 1998).

84. See 1869 Dec. Comm’r Pat. 59 (1869) (stating that “[i]t is contrary . . . to the spirit of the law, as construed by the office for many years, to grant patents for methods of book-keeping”).

patentable.⁸⁵ Since that time, no case has specifically defined the elements of a “method of doing business,” nor has Congress created a statutory definition.⁸⁶

In *Hotel Security Checking v. Lorraine*, the case often cited as fathering the business method exception, the Second Circuit reviewed a claim for a “method . . . for cash-registering and account-checking’ designed to prevent frauds . . . by waiters.”⁸⁷ The court held that “[a] system of transacting business disconnected from the means for carrying out the system is not . . . an art” and therefore is not patentable.⁸⁸ There are numerous cases in the *Hotel Security Checking* progeny,⁸⁹ but suffice it to say that, until *State Street Bank*, conventional wisdom and hornbook law⁹⁰ had been that “methods of doing business” are unpatentable. This was largely due to the fact that business methods, such as bookkeeping procedures and investment management strategies, were difficult to characterize as technical innovations or “useful” arts, which would be entitled to patent protection. Although concrete physical innovations, such as oscilloscopes for displaying electrical signals, have always been readily identifiable as technological art,⁹¹ it was more difficult to characterize noncomputerized business methods as such.

2. Why It Is a Myth

Although professed in hornbooks and discussed in dicta, the business

85. See 1912 Dec. Comm’r Pat. 434, 436-37 (D.C. Cir. 1911) (stating that “[h]ad he really invented a method of simultaneous double entry bookkeeping he would be entitled to the protection of that invention”).

86. While no case has specifically identified the elements of the business method exception, some cases have given examples of “methods of doing business.” See, e.g., *Loew’s Drive-In Theatres, Inc. v. Park-In Theatres*, 174 F.2d 547, 81 U.S.P.Q. (BNA) 149 (1st Cir. 1949). In fact, some commentators have argued that it would be a bad idea to define a “method of doing business.” See, e.g., Fuelling, *supra* note 30, at 472 n.15 (“Although [patenting methods of doing business] might promote predictability . . . it would place a judicial limit on Congress’ definition of process.”).

87. *Hotel Security Checking v. Lorraine*, 160 F. 467 (2d Cir. 1908).

88. *Id.* at 469.

89. See, e.g., *Berardini v. Tocci*, 190 F. 329 (C.C.S.D.N.Y. 1911), *rev’d*, 200 F. 1021 (2d Cir. 1912); *Guthrie v. Curlett*, 10 F.2d 725 (2d Cir. 1926); *Loew’s Drive-In*, 174 F.2d at 547, 81 U.S.P.Q. (BNA) at 149; *In re Johnston*, 502 F.2d 765, 183 U.S.P.Q. (BNA) 172 (C.C.P.A. 1974), *rev’d sub nom.* *Dann v. Johnston*, 425 U.S. 219, 189 U.S.P.Q. (BNA) 257 (C.C.P.A. 1976); *McAlpine v. AAMCO Automatic Transmissions, Inc.*, 461 F. Supp. 1232, 202 U.S.P.Q. (BNA) 575 (E.D. Mich. 1978).

90. See, e.g., DONALD S. CHISUM, *PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY, AND INFRINGEMENT* § 1.01 (1992) (“[D]iscoveries, however practical and useful, in nontechnological arts, such as . . . business and management methodology,” are denied patentability.); PETER D. ROSENBERG, *PATENT LAW FUNDAMENTALS* § 6.02[3][b] (rel. 48 June 1999).

91. See, e.g., *In re Alappat*, 33 F.3d 1526, 1537, 31 U.S.P.Q.2d (BNA) 1545, 1551 (Fed. Cir. 1994).

method exception has never truly been a bar to patentability. Recall *Hotel Security Checking*, the father of the business method exception, in which the court stated in dicta that “[a] system of transacting business disconnected from the means for carrying out the system is not [patentable subject matter].”⁹² In actuality, the court denied patentability of the system based on lack of novelty, not on the unpatentability of a business method, stating that “if the ‘art’ described in the [invention] be old, the claims cannot be upheld because of novelty in the appliances used in carrying it out,— for the reason that there is no novelty.”⁹³ The court ultimately deferred judgment on what constitutes a patentable business system.⁹⁴

After *Hotel Security Checking*, neither the Federal Circuit nor its predecessor court, the United States Court of Customs and Patent Appeals (CCPA), had ever invoked the business method exception as the sole basis for holding an invention to be non-statutory subject matter.⁹⁵ Instead, invocation of the exception was always preceded by a clearer basis under 35 U.S.C. § 101.⁹⁶ In fact, the CCPA explicitly stated after *Hotel Security Checking* that some “methods of doing business” might be patentable.⁹⁷ In addition, the PTO has continued to grant patents for inventions that are, at least arguably, business methods.⁹⁸ For example, U.S. Patent Number 4,885,686, issued after *Hotel Security Checking* and before *State Street Bank*, describes a process for the efficient resource allocation of industrial facilities to minimize costs.⁹⁹

92. 160 F. at 469.

93. *Id.*

94. *See id.* at 472.

95. *See State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1375, 47 U.S.P.Q.2d (BNA) 1596, 1603 (Fed. Cir. 1998) (“The business method exception has never been invoked by this court, or the CCPA, to deem an invention unpatentable.”), *cert. denied*, 119 S. Ct. 851 (1999). For a case-by-case analysis of the actual grounds for denying patentability in cases where the business method exception was discussed, see Fuelling, *supra* note 30, at 471-72.

96. *See State Street Bank*, 149 F.3d at 1375, 47 U.S.P.Q.2d (BNA) at 1603.

97. *See In re Wait*, 73 F.2d 982, 983, 24 U.S.P.Q. (BNA) 88, 89 (C.C.P.A. 1934) (“That a physical system contrived to enable the carrying out of transactions such as those described might be patentable . . . is quite conceivable . . .”).

98. *See Fuelling*, *supra* note 30, at 488.

99. *See* U.S. Patent No. 4,885,686 (issued Dec. 5, 1989):

Resource allocation decisions are typically subject to constraints on such allocations. Resources are always limited in overall availability, and, furthermore, the usefulness of a particular resource in some particular application may also be limited. For example, the traffic-carrying capacity of each individual link in a telecommunications system is limited, while the overall traffic offered to the communications system is also limited. Each particular allocation of resources can be associated with a “payoff,” i.e., a cost of that allocation or an allocation benefit (e.g., profit). The problem, then, is to allocate the resources so as to satisfy all of the constraints and, simultaneously, to maximize the payoff, i.e., minimize the costs or maximize the benefits.

Similarly, U.S. Patent Number 5,148,365 is entitled "Scenario Optimization" and describes a model for targeting a portfolio of financial instruments.¹⁰⁰

The critical patentability issue under the Patent Act is not whether the claimed method does "business" instead of something else, but whether the method, viewed as a whole, meets the requirements of patentability set forth in the Patent Act.¹⁰¹ In *State Street Bank*, the Federal Circuit characterized the business method exception as an "unwarranted encumbrance to the definition of statutory subject matter in section 101, that [should] be discarded as error-prone, redundant, and obsolete."¹⁰² The court reiterated its previous position that any historical distinctions among methods and their means of implementation have been blurred by the complexity of modern computerized business systems.¹⁰³ In short, the business method exception was a myth that could not withstand the Federal Circuit's scrutiny.

3. An Alternative Explanation for the Business Method Exception

The most often heard argument in support of the business method exception is that business methods are not an "art" and do not fall within other patentable subject matter "apart from the [physical] means for carrying out [the] system."¹⁰⁴ The PTO's past reluctance to grant patents for business methods, particularly computerized business methods, is probably better explained by the Supreme Court's requirement that a computer-related invention relate to some physical process or step. This physicality requirement emanates from three Supreme Court cases that together embody the current law on computer-related inventions.¹⁰⁵

In the first of the three cases, *Gottschalk v. Benson*, the Supreme Court reviewed the CCPA's grant of claims for a computer program that converted binary-coded decimal numbers into pure binary numbers.¹⁰⁶ In reviewing the claims, the Court reasoned that "[t]he mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that... the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the

100. See U.S. Patent No. 5,148,365 (issued Sept. 15, 1992).

101. See *State Street Bank*, 149 F.3d at 1375, 47 U.S.P.Q.2d (BNA) at 1603.

102. *Id.* at 1375 n.10, 47 U.S.P.Q.2d (BNA) at 1603-04 n.10 (Fed. Cir. 1998) (quoting *In re Schrader*, 22 F.3d 290, 298, 30 U.S.P.Q.2d (BNA) 1455, 1462 (Fed. Cir. 1994) (Newman, J., dissenting)).

103. *Id.* at 1376 n.13, 47 U.S.P.Q.2d (BNA) at 1603 n.13. The Internet certainly qualifies as such a system.

104. ERNEST BAINBRIDGE LIPSCOMB, 1 WALKER ON PATENTS § 2:17 (3d ed. 1984).

105. See Burtis, *supra* note 13, at 1137-42 (examining "The Supreme Court Trilogy").

106. 409 U.S. 63, 64, 175 U.S.P.Q. (BNA) 673, 674 (1972).

algorithm itself.”¹⁰⁷ The Court held that the computer program, a mathematical formula without substantial practical application except in connection with a computer, was not a patentable process.¹⁰⁸

Similarly, in *Parker v. Flook*, the Court held that a computerized method for updating alarm set points for a chemical process was not statutory subject matter.¹⁰⁹ The claimed invention included a small computer programmed to use a mathematical equation to update alarm limits for a petroleum refining process.¹¹⁰ “The patent drafter . . . attempted to avoid the problems of *Benson* simply by writing the patent application in a way that limited the use of the formula to hydrocarbon refining” and thereby “avoided ‘wholly preempting’ use of the formula in other applications.”¹¹¹ The Court explained that the “application simply provides a new and presumably better method for calculating alarm limit values” and was therefore not patentable.¹¹²

Finally, in *Diamond v. Diehr*, the Court reviewed the CCPA’s reversal of the PTO’s rejection of claims for a computerized process for curing synthetic rubber.¹¹³ The Court held that the process constituted patentable subject matter, notwithstanding that several of its steps included use of a mathematical formula and a programmed digital computer, because the process involved transformation of uncured synthetic rubber into “a different state or thing.”¹¹⁴

In response to the requirement emanating from this trilogy of cases that computerized methods must be applied in some manner to physical elements, the CCPA developed the *Freeman-Walter-Abele* two-part test under which a court was to consider (1) whether the patent claim recites a mathematical algorithm; and, if so, (2) whether the algorithm is “applied in any manner to physical elements or steps.”¹¹⁵ Although refusing to adopt the specific

107. *Id.* at 71-72, 175 U.S.P.Q. (BNA) at 676.

108. *See id.*, 175 U.S.P.Q. (BNA) at 676.

109. 437 U.S. 584, 594, 198 U.S.P.Q. (BNA) 193, 199 (1978).

110. *See id.* at 586, 198 U.S.P.Q. (BNA) at 195-96.

111. Burtis, *supra* note 13, at 1140; *see Flook*, 437 U.S. at 586, 198 U.S.P.Q. (BNA) at 195-96.

112. *Flook*, 437 U.S. at 594-95, 198 U.S.P.Q. (BNA) at 199.

113. 450 U.S. 175, 184, 209 U.S.P.Q. (BNA) 1, 10 (1981).

114. *Id.*, 209 U.S.P.Q. (BNA) at 10.

115. *In re Pardo*, 684 F.2d 912, 915, 214 U.S.P.Q. (BNA) 673, 675-76 (C.C.P.A. 1982). In *Pardo*, the CCPA described the *Freeman-Walter-Abele* two-part test as follows:

First, the claim is analyzed to determine whether a mathematical algorithm is directly or indirectly recited. 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 § 101.”

Id., 214 U.S.P.Q. (BNA) at 675-76 (quoting *In re Walter*, 618 F.2d 758, 767, 205 U.S.P.Q. 397, 407 (C.C.P.A. 1980)). As a result of this test, practitioners used a claim drafting tool—reciting software

methodology of the test,¹¹⁶ the Federal Circuit agreed with the CCPA's conceptual approach, stating that "the dispositive inquiry is whether the claim *as a whole* is directed to statutory subject matter[;] it is irrelevant that a claim may contain, as part of the whole, subject matter which would not be patentable by itself."¹¹⁷ In *In re Alappat*, the Federal Circuit, sitting en banc, found patentable subject matter in claims that recited a "means for" generating smooth digital waves on a display screen.¹¹⁸ Because the invention truly resided in the software, and because the "means" recited in the claims could have been satisfied by any general purpose computer, *Alappat* effectively relaxed the physicality requirement previously understood from the Supreme Court's trilogy of cases.¹¹⁹

With regard to the patentability of Internet business models, it appears that (1) the PTO's reluctance to grant patents for business models coincided with the Supreme Court's decision to apply the model to physical elements; and that (2) the elimination of the business method exception coincided with the relaxation of the physicality requirement. Consequently, the elimination of the business method exception, particularly in the area of computer-related inventions, is probably of little consequence.¹²⁰

claims as physical computer "means" for performing the functions of the program—when seeking protection for computer programs. See 35 U.S.C. § 112, para. 6 (1994) (permitting an element in a combination of elements to be claimed as a "means for" performing a specified function).

116. See Burtis, *supra* note 13, at 1147 n.96:

Interestingly, the Federal Circuit apparently has failed to adopt this uniform approach towards applying the *Freeman-Walter-Abele* test. Despite paying lip service to such an approach in a recent case by restating the test as requiring that an algorithm be "applied in one or more steps of an otherwise statutory process claim, or one or more elements of an otherwise statutory apparatus claim" to satisfy the requirements of § 101, the court failed to apply the test to the apparatus claims at issue in the case. *Arrhythmia Res. Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1058, 22 U.S.P.Q.2d (BNA) 1033, 1037 (Fed. Cir. 1992)

117. *In re Alappat*, 33 F.3d 1526, 1543, 31 U.S.P.Q.2d (BNA) 1545, 1557 (Fed. Cir. 1994).

118. See *id.* at 1545, 31 U.S.P.Q.2d (BNA) at 1558.

119. There was confusion regarding the physical activity requirement even at the time *Alappat* was decided. In *In re Schrader*, a case decided within four months of *Alappat*, the Federal Circuit reviewed a patent applicant's claim to a competitive bidding system for which computers were "useful" but not necessary. 22 F.3d 290, 30 U.S.P.Q.2d (BNA) 1455 (Fed. Cir. 1994). The court found the patent to be directed to nonpatentable subject matter because there was no "transformation or conversion of subject matter representative of or constituting *physical activity or objects*." *Id.* at 294, 30 U.S.P.Q.2d (BNA) at 1459.

120. See also discussion *infra* Part IV.

B. The Elimination of the Business Method Exception

1. Elimination by a Lower Court: *Paine, Webber v. Merrill Lynch*

The beginning of the end of the business method exception was shepherded by the District Court of Delaware in *Paine, Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*¹²¹ In 1982 the brokerage firm of Merrill Lynch was issued a patent on its cash management account system ("CMA").¹²² The CMA used a computer program to combine a brokerage security account, its market funds, a checking account, and a VISA charge account into a single product.¹²³ Merrill Lynch applied for a patent on the program; the claims were drafted in a "means" apparatus form describing a CMA combination.¹²⁴ After the initial success of the CMA, other firms began using the system. Faced with a patent infringement suit, Paine Webber initiated a declaratory judgment action to have Merrill Lynch's patent declared invalid.¹²⁵ In upholding the patent, the court observed that "[t]he product of the claims . . . effectuates a highly useful business method and would be unpatentable if done by hand."¹²⁶ This case is significant because the claims that "teach a method of operation on a computer to effectuate a business activity" were found to be patentable subject matter.¹²⁷

Even after *Paine, Webber*, however, courts did not universally reject the business method exception. For example, in *Ex parte Murray*, a patent was sought on a method of providing a credit card/check expense analysis accounting; the expense analysis statement generated by the method provides a running record for the user identifying the nature and purpose of each purchase.¹²⁸ The Board of Patent Appeals and Interferences stated that

the claimed accounting method, requiring no more than the entering, sorting, debiting and totaling of expenditures as necessary preliminary steps to issuing an expense analysis statement is, on its very face, a vivid example of the type of "method of doing business" contemplated by our review court as outside the protection of the patent statutes.

... Whereas an apparatus or system capable of performing a business function may comprise patentable subject matter, a method

121. 564 F. Supp. 1358, 218 U.S.P.Q. (BNA) 212 (D. Del. 1983).

122. *See id.* at 1363, 218 U.S.P.Q. (BNA) at 216.

123. *See id.* at 1361, 218 U.S.P.Q. (BNA) at 214.

124. *See id.* at 1363, 218 U.S.P.Q. (BNA) at 216.

125. *See id.* at 1360-61, 218 U.S.P.Q. (BNA) at 214.

126. *Paine, Webber*, 564 F. Supp. at 1369, 218 U.S.P.Q. (BNA) at 220.

127. *Id.*, 218 U.S.P.Q. (BNA) at 220.

128. 9 U.S.P.Q.2d (BNA) 1819, 1819 (Bd. Pat. App. & Interf. 1988).

of doing business generated by the apparatus or system is not.¹²⁹

2. Removal from the *MPEP*

In pre-1996 editions of the *Manual of Patent Examining Procedure* (*MPEP*), a paragraph of section 706.03(a) read, "Though seemingly within the category of process or method, a method of doing business can be rejected as not being within the statutory classes."¹³⁰ This paragraph has been deleted in the most recent edition of the *MPEP*.¹³¹ Similarly, the PTO's Examination Guidelines for Computer-Related Inventions have been amended to include a provision that "[o]ffice personnel have had difficulty in properly treating claims directed to methods of doing business. Claims should not be categorized as methods of doing business. Instead, such claims should be treated like any other process claims"¹³²

3. Blessing by the Federal Circuit: *State Street Bank*

In *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, the Federal Circuit held that a computerized financial method constituted patentable subject matter and declared that the business method exception was a "no longer applicable legal principle."¹³³ *State Street Bank* was the first appeal since *Alappat* of a litigated dispute concerning whether a business method constitutes statutory subject matter under 35 U.S.C. § 101 where the claims are drafted as a computer "means" for performing business functions. Signature Financial Group was the assignee of a patent directed to a "Hub and Spoke" data processing system whereby mutual funds ("Spokes") pool their assets in an investment portfolio ("Hub").¹³⁴ "The system determines the percentage share that each Spoke maintains 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."¹³⁵ In short, the "investment configuration provides the administrator of a mutual fund

129. *Id.* at 1820-21.

130. *E.g.*, MANUAL OF PATENT EXAMINING PROCEDURE § 706.03(a) (6th ed. Jan. 1995).

131. *See* MANUAL OF PATENT EXAMINING PROCEDURE (7th ed. 1998), available in <<http://www.uspto.gov/web/offices/pac/mpep/mpep.htm>> [hereinafter *MPEP*].

132. Examination Guidelines for Computer-Related Inventions, 61 Fed. Reg. 7,478, 7,479 (1996), reprinted in *MPEP*, *supra* note 131, § 2106 [hereinafter *Guidelines*].

133. 149 F.3d 1368, 1375, 47 U.S.P.Q.2d (BNA) 1596, 1602 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999).

134. *See id.* at 1371, 47 U.S.P.Q.2d (BNA) at 1599. Key elements of the claims at issue included "(a) computer processor means . . . for processing data; . . . [and] (d) second means . . . for processing data regarding assets in the portfolio and each of the funds from a previous day" *Id.*, 47 U.S.P.Q.2d (BNA) at 1599.

135. *Id.*, 47 U.S.P.Q.2d (BNA) at 1599.

with the advantageous combination of economies of scale in administering investments coupled with the tax advantages of a partnership.”¹³⁶ State Street Bank attempted to negotiate a license for the patented system, but after negotiations failed, challenged the PTO’s decision to grant Signature Financial Group a patent on the system, claiming invalidity and unenforceability and seeking partial summary judgment for failure to claim statutory subject matter under section 101 of the Patent Act.¹³⁷

The U.S. District Court for the District of Massachusetts found the claims invalid under the business method exception.¹³⁸ After reviewing several cases that supported, if only anecdotally, the business method exception, the court stated that “patenting an accounting system necessary to carry on a certain type of business is tantamount to a patent on the business itself. Because such abstract ideas are not patentable . . . as methods of doing business . . . the [patent] must fail.”¹³⁹ The court held that the computerized method of administering mutual funds was invalid as directed to non-statutory subject matter.¹⁴⁰

Instead of analyzing whether the claimed business method addressed patentable subject matter, the Federal Circuit took the “opportunity to lay this ill-conceived exception to rest”¹⁴¹ and construed the claims as directed towards “a machine, namely a data processing system for managing a financial services configuration of a portfolio established as a partnership, which machine is made up of, at the very least, the specific structures disclosed in the written description and corresponding to the means-plus-function elements . . . recited in the claim.”¹⁴² The claim is therefore for a machine programmed with the Hub and Spoke software that produces a “useful, concrete, and tangible result”¹⁴³ in the form of “numbers such as price, profit, percentage, cost, or loss.”¹⁴⁴ The Federal Circuit held that the patent had been correctly granted and that patents could not be withheld

136. *Id.* at 1370, 47 U.S.P.Q.2d (BNA) at 1598.

137. *See id.*, 47 U.S.P.Q.2d (BNA) at 1598.

138. *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 927 F. Supp. 502, 38 U.S.P.Q.2d (BNA) 1530 (D. Mass. 1996), *rev’d*, 149 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999).

139. *Id.* at 516, 38 U.S.P.Q.2d (BNA) at 1542.

140. *See id.* at 517, 38 U.S.P.Q.2d (BNA) at 1542.

141. *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1375, 47 U.S.P.Q.2d (BNA) 1596, 1602 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999).

142. *Id.* at 1372, 47 U.S.P.Q.2d (BNA) at 1599.

143. *Id.* at 1375, 47 U.S.P.Q.2d (BNA) at 1602 (quoting *In re Alappat*, 33 F.3d 1526, 1544, 31 U.S.P.Q.2d (BNA) 1545, 1557 (Fed. Cir. 1994)).

144. *Id.*, 47 U.S.P.Q.2d (BNA) at 1602.

simply because the claims covered a business model.¹⁴⁵ Therefore, after *State Street Bank*, if an online business model has a practical application, then it will probably satisfy the statutory subject matter requirements. Because the Federal Circuit's decision calls for the model to provide a "useful, concrete, and tangible result," such things as "price, profit, percentage cost, or loss" will probably meet those criteria.

IV. THE PTO'S TREND TOWARD BROADENING PATENTABLE SUBJECT MATTER

Rather than argue that the business method exception is of no consequence because it was a myth, one could argue that it is no longer of consequence due to the PTO's recent movement towards broadening the field of patentable subject matter. Quite simply, claims that in the past would have been drafted towards a business method now may be drafted towards an alternative and substantially less specious area of patentability.

In 1995 the Federal Circuit decided several cases that collectively represented a significant expansion of the scope of software patentability.¹⁴⁶ On February 28, 1996, in response to these cases, the PTO released the final version of its Examination Guidelines for Computer-Related Inventions ("Guidelines"), which deal at length with statutory subject matter issues.¹⁴⁷ The change was also due, in part, to the recognition that "business models were in and of themselves technological advances, because businesses were inventing new ways of automating services."¹⁴⁸

Under the new Guidelines, the first inquiry is whether the claim is directed towards non-statutory subject matter. Assuming that the claim survives this test, it will then be classified as (i) a specific product claim, (ii) a nonspecific product claim, or (iii) a process claim. A specific product claim is always statutory subject matter. A nonspecific product claim must be evaluated further on the basis of the underlying process. Process claims, including business method claims, may qualify as statutory subject matter under two safe harbors, pre- or post-computer physical process activity. Alternatively, the practical technological application must be explicitly claimed.¹⁴⁹ The safe harbors represent the PTO's attempt to preserve the

145. See *id.*, 47 U.S.P.Q.2d (BNA) at 1602.

146. For a history of the Federal Circuit cases, see Ronald S. Laurie & Joseph K. Siino, *A Bridge over Troubled Waters? Software Patentability and the PTO's Proposed Guidelines* (pts. 1 & 2), COMPUTER LAW., Sept. 1995, at 6, COMPUTER LAW., Oct. 1995, at 18.

147. See Guidelines, *supra* note 132.

148. Richtel, *supra* note 75.

149. See Guidelines, *supra* note 132, at 7,492 (presenting flowchart of step "IV. Determine Whether the Claimed Invention Complies with 35 U.S.C. § 101").

Freeman-Walter-Abele test,¹⁵⁰ while the alternate “technological application” test represents the PTO’s interpretation of the 1995 Federal Circuit cases.¹⁵¹

It is the technological application test that provides the key to the patentability of Internet business models that might not otherwise have been patentable prior to the 1995 Federal Circuit cases and the Guidelines. In essence, a claim not involving pre- or post-computer physical process activity, as required under the *Freeman-Walter-Abele* analysis, can nevertheless qualify as statutory subject matter by explicitly reciting a practical technological application. Therefore, while a claimed process that merely manipulates an abstract idea is non-statutory, a claimed process that explicitly limits the abstract idea to a practical technological application is statutory. Notwithstanding the Federal Circuit’s decision in *State Street Bank*, claims drafted in accordance with the Guidelines meet the requirements for patentable subject matter whether or not the claims are directed towards methods of doing business.

V. ALTERNATIVE GROUNDS FOR DENYING INTERNET BUSINESS MODEL PATENTS

Although the Federal Circuit has declared business methods to be patentable subject matter, an invention must still meet the requirements of novelty and nonobviousness and must avoid the numerous exceptions to patentability that may preclude issuance of a patent. Moreover, the mere fact that a patent has been issued does not necessarily mean that the patent will stand up to a legal challenge. Irrespective of the Federal Circuit’s decision in *State Street Bank*, claims directed to Internet business models are examined, and potentially rejected, on the following grounds.

A. Lack of Novelty

To be patentable, an invention must be new at the time of discovery by an original inventor.¹⁵² This novelty requirement lies at the heart of the patent system.¹⁵³ Section 102(a) bars a patent on an invention “known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for

150. See *supra* note 115 and accompanying text.

151. See Ronald S. Laurie & Joseph Yang, *Patenting Content: The Expanding Role of Patent Protection for Internet-Based Information Products*, in *PLI’S SECOND ANNUAL INSTITUTE FOR INTELLECTUAL PROPERTY LAW* 239, 263 (PLI Pats., Copyrights, Trademarks, & Literary Prop. Course Handbook Series No. 453, Sept. 1996).

152. See DONALD S. CHISUM, *CHISUM ON PATENTS* § 3.01 (1994).

153. See *id.*

patent.”¹⁵⁴ Thus, a prior patent or publication anywhere will “anticipate” or negate novelty, while prior use, knowledge, or invention must be in this country to negate novelty.

Many of the cases often cited as following the business method exception were actually cases in which the invention in question lacked novelty.¹⁵⁵ For example, in what appears to be the first and last Supreme Court case regarding methods of doing business, *Munson v. City of New York*, the Court considered the patentability of a system for “preserving, filing and cancelling bonds, coupons, certificates,” and all similar documents by pasting them in blank books.¹⁵⁶ Instead of deciding whether the plaintiff’s business method constituted patentable subject matter as an “art,” the Court held that it lacked novelty.¹⁵⁷

The online world is so new and is changing so rapidly that the PTO has no way to gauge whether most business models possess patentable novelty. On the Internet, things that make an idea “not novel” may be only three weeks old and available only in fairly obscure places. Yet the PTO looks primarily at issued patents and printed publications when judging novelty. It has acknowledged the difficulty in ascertaining novelty when evaluating online

154. 35 U.S.C. § 102(a) (1994).

155. See ANTHONY WILLIAM DELLER, 1 WALKER ON PATENTS § 22 (Baker, Voorhis & Co., Deller’s ed. 1937) (stating that “[a]s instances of the non-patentability of ideas, mention may be made of the various systems for doing business, such as modes of bookkeeping and hotel checking systems” and citing, in support of his proposition, those cases described in the text which rejected the inventions because they were not novel, not because they lacked patentable subject matter).

156. 124 U.S. 601, 603 (1888).

157. See *id.* at 604-05; Fuelling, *supra* note 30, at 480. Several other cases have reached the same result. See *In re Klingaman*, 22 F.3d 290, 298, 30 U.S.P.Q.2d (BNA) 1455, 1462 (Fed. Cir. 1994) (Newman, J., dissenting):

The decisions that have spoken of “methods of doing business” have, or could have, resolved the issue in each case simply by relying on the statutory requirements of patentability such as novelty and unobviousness. An illustration is the CCPA’s analysis in *In re Howard*, 55 C.C.P.A. 1121, 394 F.2d 869, 157 U.S.P.Q. 615 (C.C.P.A. 1968), wherein the court affirmed the Board of Appeals’ rejection of the claims for lack of novelty, the court finding it unnecessary to reach the Board’s section 101 ground that a method of doing business is “inherently unpatentable.” *Id.* at 872, 157 U.S.P.Q. at 617.

Ex parte Murray, 9 U.S.P.Q.2d 1819 (Bd. Pat. App. & Interf. 1988), relied on herein by the Board, can be viewed similarly, for the *Murray* holding that “the claimed accounting method [requires] no more than the entering, sorting, debiting and totaling of expenditures as necessary preliminary steps to issuing an expense analysis statement,” 9 U.S.P.Q.2d at 1820, states grounds of obviousness or lack of novelty, not of non-statutory subject matter. Indeed, in *Dann v. Johnston*, 425 U.S. 219, 189 U.S.P.Q. 257, 47 L. Ed. 2d 692, 96 S. Ct. 1393 (1976), the Supreme Court declined to discuss the section 101 argument concerning the computerized financial record-keeping system, in view of the Court’s holding of patent invalidity under section 103.

business systems.¹⁵⁸ This difficulty is going to haunt those who hold patents for Internet business models.¹⁵⁹

The Open Market patents offer a striking example of the difficulty in determining the novelty of an Internet business model and the resultant impact on the patentee's rights. After receiving its three patents,¹⁶⁰ Open Market attempted to obtain royalties or licensing fees from companies it believed were infringing the patents. In response, its competitors contended that the methods claimed in the patents were not novel and that the competitors had developed and used the same business methods long before Open Market applied for its patents.¹⁶¹ Open Market consequently had difficulty collecting royalties and decided not to press the point.¹⁶²

In another example, a competitor of Priceline.com, TravelBids, Inc., contended that it pioneered the reverse auction business method that Priceline.com patented.¹⁶³ Specifically, TravelBids, Inc. claimed that it had used the method at least one year before Priceline.com.¹⁶⁴ Interestingly, Priceline.com did not contend that its patented method was novel and therefore valid. Instead, it countered TravelBids' claims by contending that the business method used by TravelBids was different.¹⁶⁵

B. Lack of Utility

To meet the utility requirement for patentability, "an invention must perform some function of positive benefit to society."¹⁶⁶ "The purpose of the utility requirement is to assure that society obtains a 'quid pro quo' in the form of a 'substantial utility' and 'specific benefit . . . in currently available form' before granting a monopoly to an inventor."¹⁶⁷ To meet the utility

158. See Richtel, *supra* note 75 ("Because the medium is so new, [Karen Buchanan, Associate Solicitor in the Office of the Solicitor at the Patent and Trademark Office] said, patent investigators have not always had an easy time determining the relative novelty of a business model. 'We don't have a history' . . . 'We have to struggle through magazines and conference papers. Everyone is feeling the struggle.'").

159. Boulder, Colorado-based TravelBids, Inc. claims that it, not Priceline.com, pioneered the reverse auction business method. See Mel Duvall, *Priceline Patent Sparks Debate*, INTER@CTIVE WEEK ONLINE (Aug. 17, 1998) <<http://www.zdnet.com/intweek/print/980817/345090.html>>.

160. See *supra* Part II.C.

161. See Paul C. Judge, *The Internet: They've Got the Patents, But So What?*, BUS. WK., June 1, 1998, at 154B.

162. See *id.* ("It's asking the Net commerce giants to license its patented technologies—but for little money.").

163. See Duvall, *supra* note 159.

164. See *id.*

165. See *id.*

166. CHISUM, *supra* note 152, § 4.01.

167. *Id.* (quoting *Brenner v. Manson*, 383 U.S. 519, 534-35, 148 U.S.P.Q. (BNA) 689, 695

requirement,

an invention need not be superior to existing products or processes. However, it must meet three tests. First, it must be operable and capable of use. It must operate to perform the functions and secure the result intended. Second, it must operate to achieve some minimum human purpose. Third, it must achieve a human purpose that is not illegal, immoral or contrary to public policy.¹⁶⁸

With regard to proof of the utility and operability of inventions . . . , the Patent Office has long applied a rule that an invention is presumed to be operable as disclosed. The burden of proving operability and utility shifts to the applicant only if there is a reasonable doubt as to the truth of the applicant's assertions.¹⁶⁹

The utility requirement essentially means that patents are granted only for the application of ideas. To be useful, an invention must apply knowledge rather than merely consist of abstract ideas. Therefore, while a business method that applies knowledge qualifies as useful, a theoretical method of operating a business or a mere management philosophy is unpatentable as it only encompasses ideas.¹⁷⁰

It is this concept—patents may only be granted for the application of ideas—which may prove to be the nemesis of many Internet business model patents. Many of the business model patents described above¹⁷¹ arguably describe an abstract idea for doing business rather than a patentable invention. For example, CyberGold asserted that its patent covers “any program that rewards people for responding to online advertising by giving them ‘cash, points, frequent-flyer miles, or other forms of compensation.’”¹⁷² It is difficult to argue with those who have suggested that the patent covers a concept, not a technology.¹⁷³

C. Obviousness

The Supreme Court long ago established that the *sine qua non* of patentability is “invention” and that the protection of the patent law does not extend to an “improvement [that] is the work of the skilful mechanic, not that

(1966)).

168. CHISUM, *supra* note 152, § 4.01.

169. *Id.* § 4.04[1].

170. See *Gottschalk v. Benson*, 409 U.S. 63, 175 U.S.P.Q. (BNA) 673 (1972) (holding that ideas are unpatentable).

171. See *supra* Part II.C.

172. Craig Bicknell, *Giveaways Are Gonna Cost Ya*, WIRED NEWS (Aug. 24, 1998) <<http://www.wired.com/news/news/business/story/14612.html>>.

173. See Wendy R. Leibowitz, *Patents and E-Business*, NAT'L L.J., June 14, 1999, at A19 (“Some people will end up paying licensing fees for concepts, such as coupons, that are familiar.”).

of the inventor.”¹⁷⁴ In 1952 Congress codified this judicial standard by requiring that the improvement sought to be patented “would [not] have been obvious at the time the invention was made to a person having ordinary skill in the art.”¹⁷⁵ Whether referred to as “invention” or “nonobviousness,” the requirement is based on the constitutional command that patents be used “to promote the Progress of . . . useful Arts.”¹⁷⁶ Patents may not be issued to remove existing knowledge from the public domain or to limit access to materials already available.

The nonobviousness and novelty requirements are closely related:

Novelty acts primarily in a negative fashion. If an invention is not new, then the invention is not patentable. That ends the inquiry. But if the invention is new, further inquiry must be made into whether it is “new enough,” that is, not obvious to one with ordinary skill in the art.¹⁷⁷

It has been argued that the nonobviousness requirement is inappropriate for the patenting of computer code.¹⁷⁸ While “[p]atent examiners and judges are accustomed to considering even small, incremental changes as deserving new patents,” computer scientists “are trained to generalize solution principles from one problem to another,” which results in minor changes to software programs that other programmers would consider obvious.¹⁷⁹ A minor change to an Internet business model that would appear obvious to those familiar with the art may not appear so to an examiner in the PTO.¹⁸⁰

Once again, Internet business model patents will likely have difficulty meeting the nonobviousness requirement. Many times the model for which a patent is sought is simply an old idea that is being applied on the Internet. For example, recall that Priceline.com’s patent claims a method that allows buyers to make an offer to purchase goods or services and for “sellers . . . to bind a buyer to a contract based on the buyer’s purchase offer.”¹⁸¹ This is clearly not a new concept in offline commerce, and Priceline.com’s critics have questioned the validity of the patent.¹⁸²

174. *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851).

175. 35 U.S.C. § 103(a) (Supp. III 1997).

176. U.S. CONST. art. I, § 8, cl. 8; *see also* *Graham v. John Deere Co.*, 383 U.S. 1, 5-6, 148 U.S.P.Q. (BNA) 459, 462 (1966).

177. CHISUM, *supra* note 152, § 3.01.

178. *See, e.g., Against Software Patents: The League for Programming Freedom*, 14 HASTINGS COMM. & ENT. L.J. 297, 302 (1992).

179. *Id.*

180. *See id.*

181. *See supra* text accompanying note 73.

182. *See* Leibowitz, *supra* note 173 (noting a practitioner’s concern that “patents are being granted for familiar business models merely because they are appearing on the Web” and that “Dutch

Even if a method has not been performed offline prior to its introduction on the Internet, it still may not pass the nonobviousness hurdle. The reason is that it is difficult for the PTO to ascertain the existence of prior art,¹⁸³ much less determine which of the subtle differences among models make one model patentable and others not. For instance, TravelBids, Inc. claimed to have pioneered Priceline.com's patented business method, contending that "the reverse auction is a common method of conducting both online and conventional business transactions."¹⁸⁴

D. Abstract Ideas

The legal framework for patentability under 35 U.S.C. § 101 has evolved into a judicially defined set of principles dictating that such things as laws of nature, natural phenomena, and abstract ideas fall outside the realm of permissible statutory subject matter.¹⁸⁵ For instance: "A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."¹⁸⁶ "Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work."¹⁸⁷ "The oft-quoted embodiment of these exceptions is that Albert Einstein could not have patented $E = mc^2$ and Sir Isaac Newton could not have patented the laws of motion."¹⁸⁸

Many of the cases originally evaluated as business method cases actually involved abstract ideas. For example, in *In re Maucorps*, the patent claimed a business methodology for deciding "the optimum number of times a sales

auctions have existed in the real world for centuries").

183. See *supra* text accompanying note 159.

184. Duvall, *supra* note 159.

185. See Burtis, *supra* note 13, at 1137 n.43:

These three categories evolved from somewhat more generalized principles. See, e.g., *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874) ("An idea of itself is not patentable, but a new device by which it may be made practically useful is."); *LeRoy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."); *In re Bergy*, 596 F.2d 952, 965, 201 U.S.P.Q. (BNA) 352, 364 (C.C.P.A. 1979) (finding it well established that "principles, laws of nature, mental processes, intellectual concepts, ideas, natural phenomena, mathematical formulae, methods of calculation, fundamental truths, original causes, motives, [and] the Pythagorean theorem" do not fall within section 101).

186. *LeRoy*, 55 U.S. at 175.

187. *Gottschalk v. Benson*, 409 U.S. 63, 67, 175 U.S.P.Q. (BNA) 673, 675 (1972).

188. Burtis, *supra* note 13, at 1138; see also *Diamond v. Chakrabarty*, 447 U.S. 303, 309, 206 U.S.P.Q. (BNA) 193, 197 (1980) ("[A] new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity.").

representative for a business should visit each customer over a period of time.”¹⁸⁹ *In re Meyer* involved a patent application whose “claims recite a mathematical algorithm, which represents a mental process that a neurologist should follow.”¹⁹⁰ Clearly, neither of the alleged “inventions” in these cases falls within any section 101 category, and closer scrutiny reveals that the claimed inventions in both *Maucorps* and *Meyer* were rejected as abstract ideas, not as unpatentable business methods.¹⁹¹

It is common for owners of online business model patents to make broad, abstract claims regarding the coverage of their patents that are not sustainable in court. For example, in 1996 E-Data asserted that its patent “covered all methods for purchasing and downloading merchandise, news, fonts and software.”¹⁹² In a judicial thrashing, U.S. District Court Judge Barbara Jones stated that:

In an obvious attempt to expand the scope of its patent beyond that which was intended, plaintiff implausibly asserts that its patent covers certain uses of the Internet and World Wide Web, and applies to certain CD-ROM applications. It is abundantly clear to the Court, however, that the [patent does] not support plaintiff’s broad interpretation.¹⁹³

It appears that another of the Internet business model patents may be headed for the same fate. As noted,¹⁹⁴ CyberGold asserted that its patent covers “any program that rewards people for responding to online advertising by giving them ‘cash, points, frequent-flyer miles, or other forms of compensation.’”¹⁹⁵ Based on this description, CyberGold’s patent covers a concept, not a technology, and will be subjected to the same destiny as the E-Data patent. The fact that the patent may not be as broad as CyberGold claims may be evidenced by a patent subsequently issued to Netcentives for an “on-line, interactive frequency and award redemption program.”¹⁹⁶

189. 609 F.2d 481, 482, 203 U.S.P.Q. (BNA) 812, 813 (C.C.P.A. 1979).

190. 688 F.2d 789, 795, 215 U.S.P.Q. (BNA) 193, 198 (C.C.P.A. 1982).

191. See *Maucorps*, 609 F.2d at 486, 203 U.S.P.Q. (BNA) at 816; *Meyer*, 688 F.2d at 796, 215 U.S.P.Q. (BNA) at 199.

192. Sullivan, *supra* note 79.

193. *Interactive Gift Express, Inc. v. CompuServe, Inc.*, 47 U.S.P.Q.2d (BNA) 1797, 1809 (S.D.N.Y. 1998).

194. See *supra* text accompanying note 172.

195. Bicknell, *supra* note 172.

196. U.S. Patent No. 5,774,870 (issued June 30, 1998).

E. Mathematical Algorithms

In *State Street Bank*, the Federal Circuit circumscribed the exception of mathematical algorithms from statutory subject matter. The district court had applied the Supreme Court's trilogy of cases¹⁹⁷ and lower court precedent to ascertain whether the claims fell within the exception.¹⁹⁸ Detecting the presence of a mathematical algorithm, the court inquired into whether the claims defined any physical activities or objects and found that "[t]he claims do not recite any significant pre- or post-solution activity. Neither does the invention measure physical objects or phenomena . . . nor does it physically convert data into a different form as in *Alappat*."¹⁹⁹ Accordingly, the court held the claims to be invalid as directed to non-statutory subject matter under the mathematical algorithm exception.²⁰⁰ On appeal, the Federal Circuit reversed, stating that the two-part test had "little, if any, applicability," and emphasized that the statutory subject matter inquiry should focus not on the specific statutory category but on the "essential characteristics" of the claimed invention, specifically, its practical utility.²⁰¹

The purpose of the patent system is to promote innovation.²⁰² However, software and the online business models it generates may not be sufficiently removed from mathematical algorithms to be eligible for patent protection. Methods of doing business are sometimes determined to be unpatentable subject matter because they recite mathematical concepts disembodied from a specific structure or process. However, "if no *Benson* algorithm"²⁰³ exists, the product of a computer program is irrelevant, and the focus of analysis should be on the operation of the program on the computer."²⁰⁴

197. See discussion *supra* Part III.A.3.

198. See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 927 F. Supp. 502, 514, 38 U.S.P.Q.2d (BNA) 1530, 1540-41 (D. Mass. 1996), *rev'd*, 149 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1596 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999).

199. *Id.* at 515, 38 U.S.P.Q.2d (BNA) at 1541.

200. See *id.*, 38 U.S.P.Q.2d (BNA) at 1541.

201. *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1374-75, 47 U.S.P.Q.2d (BNA) 1596, 1601-02 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 851 (1999).

202. See CHISUM, *supra* note 152, § 4.01.

203. See *supra* text accompanying notes 106-08.

204. *Paine, Webber, Johnson & Curtis, Inc. v. Merrill, Lynch, Pierce, Fenner & Smith, Inc.*, 564 F. Supp. 1358, 1369, 218 U.S.P.Q. (BNA) 212, 220 (D. Del. 1983) (synthesizing various CCPA holdings).

VI. CONCLUSION

The life of the business method exception was short and of little importance. From its birth in *Hotel Security Checking* in 1908 until its demise in *State Street Bank* in 1998, its existence was confined to dicta. Its presence was subsumed by the more substantive facets of patent law such as the Supreme Court's holdings on computer-related inventions and the PTO's trend towards broadening patentability. It was an exception that was never really an exception.

The advent of the Internet has recently brought a wave of business method patents. Many applicants consider the Federal Circuit's elimination of the business method exception a ticket to automatic patentability. While the PTO may prove them right in the short term, it is likely that patentees will soon discover that their newly issued patents are viewed by their competitors as unenforceable or deemed by the courts as invalid. In either case, the significance of the elimination of the business method exception will soon pass. Although Internet business model patents may look like the wave of the future, they are merely a ripple on the sea of patentability.

