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PATENTS, TAXES, AND THE NUCLEAR OPTION: DO WE NEED A “TAX STRATEGY PATENT” BAN TREATY?

Max Stul Oppenheimer†

I. INTRODUCTION

Periodically, as industries discover that the patent statute applies to them, there are calls for industry-specific exemptions or special treatment.¹ The tax planning industry is the latest to encounter the patent system, and has reacted according to the general pattern. The reaction is all the more understandable in this particular case, where tax practitioners may be more comfortable with the concept of an industry-specific exception than would patent practitioners: patent law is a system of broad principles and few specific exceptions.²

Following the initial reaction, though, industries typically adapt to the patent system and incorporate patents as part of their business model. For example, the biotech industry languished until the Supreme Court held that patent law extended to living inventions.³ Today, the 360 largest biotech

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1. For example, the Patent Office initially took the position that software was not patentable. Examination of Patent Applications on Computer Programs, 33 Fed. Reg. 15,609, 15,609-10 (Oct. 22, 1968). When the Supreme Court held that software could be patentable subject matter, concerns were expressed that allowing software to be patented would have a debilitating effect on the software industry (and would require the Patent Office to process thousands of additional applications). *Parker v. Flook*, 437 U.S. 584, 587-88 (1978). When the Supreme Court held that living organisms could be patentable subject matter, it was argued that genetic patents should not be issued because “the dangers are far too substantial . . .” *Diamond v. Chakrabarty*, 447 U.S. 303, 316 (1980).

2. Atomic Weapons are the only category of invention completely excluded from patent eligibility. The exclusion is contained, not in the patent statute, but in the Atomic Energy Act. 42 U.S.C. § 2181(a) (2000). There is also one category of invention (medical procedures) as to which patents are available but infringement remedies are denied. 35 U.S.C. § 287(c) (2000). There are also special defenses to infringement of business method patents for certain users. *Id.* § 273(b)(1). In addition, any patent may be condemned before issue if its publication would jeopardize national security. See Max Stul Oppenheimer, *Harmonization Through Condemnation: Is New London the Key to World Patent Harmony?*, 40 VAND. J. TRANSNAT’L L. 445, 493-95 (2007) (discussing takings of patents by eminent domain). If the patent is condemned, however, the invention is simply taken by eminent domain, and compensation is paid in lieu of issuing the patent. *Farrand Optical v. U.S.*, 317 F.2d 875, 876 (2d Cir. 1962).

3. Council for Responsible Genetics, *DNA Patents Create Monopolies on Living Organisms* (Apr. 2000), <http://www.actionbioscience.org/genomic/crg.html>.

companies have a market cap over \$500 billion,⁴ and the first biotech company, Genentech, alone generates more than \$9 billion in revenue annually and employs more than 10,000 people.⁵ Software companies, which once thought software unpatentable, now generate annual patent licensing revenue in the billions.⁶ Even if the tax planning industry does not experience growth on this scale, it is unlikely that tax strategy patents will pose a threat to the industry. As a system that can grant government sanctioned monopolies, the patent statute includes significant hurdles to patentability to ensure that such monopolies are granted only in exchange for meaningful contributions.⁷ Those hurdles are particularly well-suited to deal with tax strategy patents.

To explain why tax strategy patents pose no serious threat, this article begins with a brief history of the emergence of and reactions to tax strategy patents, followed by an overview of the U.S. patent system's objectives and methods. Then this article traces how a tax strategy patent application would be handled by the U.S. Patent and Trademark Office ("USPTO") and, if issued, the rights it would confer on its owner, and concludes that tax strategy patents are likely to be valueless. Finally, suggestions are offered for helping to assure that the patent system responds appropriately in evaluating tax strategy patent applications.

II. THE EMERGENCE OF TAX STRATEGY PATENTS

A. The Legal Basis for Tax Strategy Patents

Patents are only available for certain categories of advances,⁸ enumerated in 35 U.S.C. § 101, which provides: "[w]hoever 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. . . ."⁹ There are no special subcategories—machines, manufactures, compositions of matter and processes may be patented if the claimed invention meets the remaining statutory criteria, while things that are not machines, manufactures, compositions of matter or processes may not be patented even if the claimed invention meets the remaining criteria.¹⁰ Early cases drew a distinction

4. *Reports Highlight Recent Developments from Burrill & Company*, 2007 LIFE SCI. WKLY. 4380 (June 26, 2007).

5. GENENTECH, GENENTECH 2006 ANNUAL REPORT § 3 (2006), available at <http://www.gene.com/gene/ir/financials/annual-reports/2006/2006annualreport.pdf>.

6. In 2006, IBM alone earned more than \$1 billion in royalty revenue, largely from software patents. IBM, 2006 ANNUAL REPORT, ftp://ftp.software.ibm.com/annualreport/2006/2006_ibm_annual.pdf.

7. 35 U.S.C. § 101.

8. See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 483 (1974) ("[N]o patent is available for a discovery, however useful, novel, and nonobvious, unless it falls within one of the express categories of patentable subject matter of 35 U.S.C. § 101 . . .").

9. 35 U.S.C. § 101.

10. Other countries have created technology-specific exclusions from patentability. The most common are computer software and biotechnology industries in which U.S. companies hold dominant positions and which are major contributors to the U.S. economy. See, e.g., European Patent Convention art. 52(2) (limiting patent protection for software); European Patent Convention art. 53 (limiting patent protection for

between invention and mere observation of a natural phenomenon, holding only the former patentable.¹¹ Over time, in an effort to provide practical guidance on locating the dividing line, the circuit courts, including the Court of Claims and Patent Appeals, a predecessor of the Federal Circuit, proposed certain bright line tests, each of which at one time was identified as a category that was unpatentable *per se*.¹²

In *Diamond v. Chakrabarty*, the Supreme Court rejected one such bright line category, living matter.¹³ In *State Street Bank & Trust Co. v. Signature Financial Group*, the Federal Circuit noted the breadth of the *Chakrabarty* decision and concluded that business methods, like living organisms could satisfy the patentable subject matter requirement, and therefore a patent that met the other requirements of the statute was not invalid solely because it related to accomplishing a business objective.¹⁴ The Supreme Court denied certiorari,¹⁵ and has not spoken on the subject of patentable subject matter since.¹⁶

To date, one case has been filed alleging infringement of a tax strategy patent. On May 20, 2003, the USPTO issued U.S. Patent 6,567,790 for "Estate Planning Method for Minimizing Tax Liability," claiming the use of stock options to fund a grantor retained-annuity trust.¹⁷ The patentee sued for the unlicensed use of the technique, and the case was settled by a consent decree that left open the question of patent validity.¹⁸

B. The Patent Office Response

Following the *State Street* decision, the USPTO has granted patents on business methods¹⁹ in a variety of fields, and Congress has enacted special rules allowing competitors to continue to use patented business methods under

biotechnology). See generally Oppenheimer, *supra* note 2 at 454 n. 36 (noting other examples of exclusions from patentability).

11. See, e.g., *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948) (stating that patents cannot be issued for the discovery of nature).

12. See *infra* Part III.D.1 (discussing the patent office's rejection of claims to inventions using mathematical algorithms).

13. *Diamond v. Chakrabarty*, 447 U.S. 303, 318 (1980).

14. *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999).

15. *Id.*

16. In an earlier case, the Court declined to discuss the section 101 argument concerning a computerized financial record-keeping system, holding the patent invalid under section 103 instead. *Dann v. Johnston*, 425 U.S. 219, 225 (1976). A dissent in the decision to dismiss certiorari in *Lab. Corp. of Am. Holdings v. Metabolite Lab., Inc.*, suggests that the Federal Circuit may have gone too far in expanding the reach of patentable subject matter. 548 U.S. 124, 124-39 (2006) (Bryer, J., dissenting). See *infra* Part III.D (arguing that the Supreme Court never intended to create an expansive, fourth category of subject matter excluded from Section 101).

17. U.S. Patent No. 6,567,790 (filed Dec. 1, 1999).

18. *Wealth Transfer Group, LLC v. Rowe*, No. 3-06 Civ. 24 (D. Conn. Mar. 9, 2007).

19. The USPTO has published a white paper that traces the history of business method patents and lists a sampling of such patents. See generally U.S. PATENT & TRADEMARK OFFICE, A USPTO WHITE PAPER: AUTOMATED FINANCIAL OR MANAGEMENT DATA PROCESSING METHODS (BUSINESS METHODS) (2000), available at <http://www.uspto.gov/web/menu/busmethp/whitepaper.doc>.

certain circumstances.²⁰

One of the challenges for examination of tax strategy applications is the difficulty of finding relevant prior art.²¹ This is a challenge the USPTO has faced before, and is not unique to tax strategies, but is inherent in fields of rapidly developing technology.

In response to the 1998 decision in *State Street*, the USPTO began planning changes in operation, tripling the number of examiners assigned to the unit examining business method applications, and identifying new databases to be searched in determining patentability.²² By 2001, the USPTO could report that:

82 examiners work in workgroup 2160. This is an increase of 47 examiners since the beginning of Fiscal Year 2000. To achieve this increase, an examiner work assignment program was initiated that brought 36 experienced examiners from other areas of the USPTO that had an interest and the necessary backgrounds in the business method area. . . . The majority of the examiners in Class 705 [the class in which business method patents would be classified] have data processing and computer education or experience. Other educational and business industry work experience includes the fields of Banking, Securities, Business Development, Marketing Analysis, Real Estate Analysis, Business Consulting, Management, Sales, Insurance, Business Information Systems, and Financial Analysis. Additionally, 30 examiners have advanced or multiple degrees, 12 have law degrees, 7 have Ph.D. and 21 have their Masters Degree (including 6 examiners with an MBA).²³

There was a learning curve, manifested in a longer than average delay in initially acting on business method patents while the USPTO adjusted, but by the end of 2001 the average pendency of a business method application was within three months of the overall USPTO average.²⁴

The USPTO recently reported that applications for business method patents rose from 1,500 in 1998 (the year that *State Street* was decided) to over 9,000 in 2006 and outlined its plans for the area,²⁵ including steps specifically

20. 35 U.S.C. § 273 (2000) (providing a defense to patent infringement for users of the patented method whose use predated the filing date of the patent by at least one year).

21. See, e.g., Dustin Stamper, *Tax Strategy Patents: A Problem Without a Solution?*, 115 TAX NOTES 300, 302 (2007) (noting difficulties at the USPTO in novelty and non-obviousness inquiries).

22. U.S. PATENT & TRADEMARK OFFICE, *supra* note 19, at 9. In the two years since the Federal Circuit decision to the publication of the White Paper, the USPTO increased the number of examiners in Class 705 from twelve to thirty-eight, and reported that “[s]eventeen of the 38 examiners have advanced or multiple degrees. Of these 4 have an MBA or other business degrees, 4 have a JD degree, 4 have Ph.D. degrees, and 7 have Masters Degrees.” *Id.* The USPTO had also identified databases of non-patent literature, which examiners are to consult in addition to searching the patent database. *Id.* at 15.

23. WYNN COGGINS, BUSINESS METHODS STILL EXPERIENCING SUBSTANTIAL GROWTH – REPORT OF FISCAL YEAR 2001 STATISTICS (2002), <http://www.uspto.gov/web/menu/pbmethod/fy2001stport.html>.

24. *Id.* “The average pendency to first action in Class 705 is 23.5 months. This can be compared to an average pendency to first action of 14.6 months for the entire USPTO. The average time to disposal is 28.5 months in Class 705. This can be compared to an average time to disposal of 25.6 months for the entire USPTO.” *Id.*

25. WYNN W. COGGINS, UPDATE ON BUSINESS METHODS FOR THE BUSINESS PARTNERSHIP MEETING (2007), available at <http://www.mielelawgroup.com/files/business%20methods%20presentation.pdf>.

directed to tax strategy patent applications. Among those steps, the USPTO established an examination subclass dedicated to tax strategy patents²⁶ and partnered with the Internal Revenue Service “to pursue training and information exchange”²⁷

The problems posed for examination of tax strategy patent applications are reminiscent of those faced by the USPTO in examining software applications. In 1999, the USPTO held hearings seeking help in designing a strategy for dealing with prior art in the then-emerging field of software patents.²⁸ Assistant Secretary Dickinson commented: “The challenge that we have before us is a challenge for certain emerging technologies. For some, we suspect that the databases and resources the USPTO relies on may be not enough to enable the patent examiner to find the best, relevant and current prior art.”²⁹ Thus, though tax strategy applications will present specific unique problems,³⁰ the general problem of developing new search strategies and establishing new organizations to handle new technologies has been solved.

C. The Concerns of the Tax Bar

On February 16, 2007 Senators Levin, Coleman and Obama introduced the Stop Tax Haven Abuse Act, which would limit patents on “invention[s] designed to minimize, avoid, deter, or otherwise affect liability for Federal, State, local or foreign tax”³¹

Senator Levin’s comments introducing the bill reflecting many of the concerns of the tax bar:

From 2001-2007, the number of examiners increased from seventy-seven to 197. *Id.* Within the finance arts section of business methods, the USPTO had sixty-eight examiners and planned to add thirty-seven more examiners in the area by end of fiscal year 2007 and “[t]he USPTO currently has a proposal before the Office of Personnel Management that would allow the USPTO to pilot [sic] hiring patent examiners with specific backgrounds in finance, tax and insurance.” *Id.*

26. *Id.* (explaining that the director identified 60 issued patents related to tax strategy and 86 published applications, which had not yet been examined).

27. *Id.*

28. Press Release, U.S. Patent & Trademark Office, PTO to Hold Separate Hearings on Computer Software Patents and Native American Insignia Trademarks (July 13, 1999), available at <http://www.uspto.gov/web/offices/com/speeches/99-21.htm>.

29. *Public Hearing on Issues Related to the Identification of Prior Art During the Examination of Patent Application, Before the United States Department of Commerce Patent and Trademark Office* (1999) (statement of Todd Dickenson, Assistant Secretary of Commerce), available at www.uspto.gov/web/offices/com/hearings/priorart/prior_art1.doc.

30. The tax bar has tended to keep many strategies secret, even resorting to confidentiality agreements prohibiting clients from disclosing strategies. See, e.g., 67 Fed. Reg. 64,799 (Oct. 22, 2002) (discussing confidential tax shelters). This approach presents special risks for patentability. See *infra* Part III.

31. Press Release, U.S. Sen. Carl Levin, Coleman, Obama Introduce Stop Tax Haven Abuse Act (Feb. 17, 2007), available at <http://www.senate.gov/~levin/newsroom/releassecfm?id=269479> [hereinafter Press Release, *Stop Tax Haven Abuse Act*]. The administrative problems of this approach would appear insurmountable. For example, the patent at issue in *State Street*, which opened the door for all business method patents, would fall under the proposed ban. *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998). Business method patents are presumably unobjectionable—Congress has implicitly recognized their validity by providing a special defense to infringement of business method patents but not withdrawing the USPTO’s authority to issue them. See *infra* note 117; *infra* Part IV (discussing upholding a business method patent and tax strategy patents).

1. The fear that tax shelter patents might increase abusive activities³²
2. The fear that the patent office is not equipped to evaluate tax strategy patents³³
3. The fear that owners of tax strategy patents might misrepresent the patent as a government endorsement of the underlying strategy³⁴
4. The fear that owners of tax strategy patents could charge a fee for use of the patent³⁵
5. The fear that patents would provide incentives for innovation in a field where such incentives are unnecessary.³⁶

A similar set of concerns was catalogued by Ellen Aprill, Associate Dean for Academic Programs at Loyola Law School, at the ABA annual meeting.³⁷ To summarize:

1. "The benefit of our patent system . . . is the encouragement of innovation [M]any tax practitioners suggest that no such incentive is required to encourage development of new tax strategies",³⁸
2. "the patent holder, rather than Congress, would decide eligibility for obtaining a tax advantage";³⁹
3. "patents are not a government seal of approval, although they are often seen – and may be marketed – as such";⁴⁰

32. Press Release, *Stop Tax Haven Abuse Act*, *supra* note 31 ("Section 303 of our bill addresses the growing problem of tax shelter patents, which has the potential for significantly increasing abusive tax shelter activities.").

33. *Id.* ("[T]ax strategy patents . . . [are] issued by patent officers who, by statute, have a background in science and technology, not tax law, and know little to nothing about abusive tax shelters.").

34. *Id.* ("Patents issued for aggressive tax strategies, for example, may enable unscrupulous promoters to claim the patent represents an official endorsement of the strategy and evidence that it would withstand IRS challenge.").

35. *Id.* ("If a single tax practitioner is the first to discover an advantage granted by the law and secures a patent for it, that person could then effectively charge a toll for all other taxpayers to use the same strategy, even though as a matter of public policy all persons ought to be able to take advantage of the law to minimize their taxes.").

36. *Id.* ("In the tax arena, however, there has historically been ample incentive for innovation in the form of the tax savings alone. The last thing we need is a further incentive for aggressive tax shelters."). It is ironic that the proposal to introduce a special interest exception into the patent law was made in the same bill that sought to reduce abuses of special interest exceptions in the tax statute.

Here's just one simplified example of the gimmicks being used by corporations to transfer taxable income from the United States to tax havens to escape taxation. Suppose a profitable U.S. corporation establishes a shell corporation in a tax haven. The shell corporation has no office or employees, just a mailbox address. The U.S. parent transfers a valuable patent to the shell corporation. Then, the U.S. parent and all of its subsidiaries begin to pay a hefty fee to the shell corporation for use of the patent, reducing its U.S. income through deducting the patent fees and thus shifting taxable income out of the United States to the shell corporation. The shell corporation declares a portion of the fees as profit, but pays no U.S. tax since it is a tax haven resident. The icing on the cake is that the shell corporation can then 'lend' the income it has accumulated from the fees back to the U.S. parent for its use. The parent, in turn, pays 'interest' on the 'loans' to the shell corporation, shifting still more taxable income out of the United States to the tax haven. This example highlights just a few of the tax haven ploys being used by some U.S. corporations to escape paying their fair share of taxes here at home.

Statement of Senator Carl Levin on Introducing the Stop Tax Haven Act, Part 1, Feb. 17, 2007, <http://levin.senate.gov/newsroom/release.cfm?id=269514>.

37. See generally Ellen P. Aprill, *Responding to Tax Strategy Patents* (2007) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=980347.

38. *Id.* at 5.

39. *Id.* at 7.

40. *Id.* at 9.

4. “[a]s a result of the difficulties in identifying prior art, tax practitioners are concerned that many of the patents that have or will be issued for tax strategies will inevitably involve techniques that have long been accepted as routine”;⁴¹ and

5. “The proliferation of tax strategy patents would also affect professional culture. Historically, the dissemination of tax planning ideas has been open and widespread.”⁴²

On April 20, 2007, the incoming chair of the ABA Section of Taxation stated that the section’s highest priority would be fighting patenting of tax strategies, which the chair characterized as “a threat to the American tax system.”⁴³

Much of the concern arises from a misunderstanding of the patent system, which is nearly as complex (although considerably more rational) than the tax system.⁴⁴ Some of the concern is attributable to the inherent lag between the emergence of a new technology and the practical ability of the legal system to respond, a problem not unique to the patent system.⁴⁵ To the extent the concerns are substantive, they are the intended result of a system whose origins trace to the Constitution and to the first Congress.⁴⁶

Though the concern of the tax bar has focused on the question of whether tax strategy patents are statutory subject matter, a patent will be denied if the application fails *any* of the statutory requirements.⁴⁷ In analyzing the concerns, it will be helpful to have a brief overview of the constitutional and statutory authority, goals, and methods of the patent system.

III. THE PATH (AND HURDLES) FACING A TAX STRATEGY PATENT APPLICATION

A. The Basic Rules of the Patent System

The power to create a patent system arises under Article I, section 8 of the Constitution, which grants Congress the power to reward invention by granting monopolies on the invention for a limited time.⁴⁸ The power is exercised in

41. *Id.* at 14. The patent statute denies patentability to such applications, but the concern is that the patent office will fail to find the prior art, which would lead to denial of the application. In this case, the issued patent could still be invalidated by litigation, although it is a valid concern that the cost of such litigation raises the cost of using the patented strategy.

42. *Id.* at 19.

43. Alison Bennett, *Chairman-Elect of ABA Section of Taxation Vows to Fight Patenting of Tax Strategies*, PATENT, TRADEMARK & COPYRIGHT DAILY (BNA), Apr. 24, 2007.

44. The patent statute has never required a simplification act. *Cf.* Tax Reduction and Simplification Act of 1977, P.L. 95-30, 91 Stat. 39 (1997); Reporting Simplification Act of 2006, P.L. 109-280, 120 Stat. 1057 (2006).

45. Manav Tanneeru, *Legislation Can't Keep Pace with Technology*, CNN.COM, Oct. 18, 2005, www.cnn.com/2005/TECH/10/17/wireless.legislation/index.html.

46. *See* U.S. CONST. art. I, § 8, cl. 8 (“Congress shall have Power . . . [t]o 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 . . .”).

47. U.S. PATENT & TRADEMARK OFFICE, U.S. DEPARTMENT OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE 2100.5 (8th ed. 2007) [hereinafter MPEP].

48. U.S. CONST. art. I, § 8, cl. 8. For a detailed analysis of how the clause entered the Constitution, see

Title 35 of the U.S. Code.⁴⁹ Regulations are contained in Title 37 of the Code of Federal Regulations,⁵⁰ and specific internal rules governing the examination of patent applications are contained in the Manual of Patent Examining Procedure (“MPEP”).⁵¹

In order to receive a patent, an inventor must file an application with the USPTO.⁵² The application is reviewed by a patent examiner for compliance with the patent statute, which requires, among other things, a determination that the claimed invention:⁵³

1. is statutory subject matter, i.e., falls within at least one of the following categories: machine, manufacture, composition of matter or process;⁵⁴

2. is useful,⁵⁵ meaning, under current patent office rules, that the claimed invention has a “specific, substantial, and credible use”;⁵⁶

3. is novel,⁵⁷ meaning that it was not in the public domain⁵⁸ before the later of the applicant’s date of invention or one year prior to the effective date of the applicant’s patent application filing.⁵⁹

4. would not be considered obvious by someone of ordinary skill in the field⁶⁰ who, under the rules of the patent statute, is presumed to have complete knowledge of the prior art;⁶¹

5. is described and illustrated in the application in sufficient detail to teach someone of ordinary skill in the art how to make and use the invention;⁶²

6. discloses the best way of carrying out the invention;⁶³ and

7. is claimed in a sufficiently specific manner to apprise the public of the scope of the claimed patent monopoly.⁶⁴

Edward C. Walterscheid, *To Promote the Progress of Science and Useful Arts: The Background and Origin of the Intellectual Property Clause of the United States Constitution*, 2 J. INTELL. PROP. L. 1 (1994).

49. 35 U.S.C. §§ 101-376 (2000).

50. 37 C.F.R. §§ 1.1-1.997 (2007).

51. MPEP, *supra* note 47, at 700.1 - .334.

52. 35 U.S.C. § 111(a)(1).

53. It is important to note that what is examined and may ultimately be protected by a patent is the “claimed invention,” not the underlying or background concepts. MPEP, *supra* note 47, at 2100-6. Many of the concerns expressed about tax strategy patents disappear when the analysis focuses on what is actually claimed as opposed to what is described in the application.

54. 35 U.S.C. § 101; *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 483 (1974) (“[N]o patent is available for a discovery, however useful, novel, and nonobvious, unless it falls within one of the express categories of patentable subject matter of 35 U.S.C. § 101 . . .”).

55. 35 U.S.C. § 101.

56. MPEP, *supra* note 47, at 2100.20.

57. 35 U.S.C. §§ 101-102.

58. The public domain is a term of art, meaning in general that which is available to the public, but with important exceptions for things that were maintained in confidence. *See infra* Part III.F.

59. 35 U.S.C. § 102(b).

60. *Id.* § 103.

61. *In re Winslow*, 365 F.2d 1017, 1020 (C.C.P.A. 1966).

62. 35 U.S.C. §§ 112, 113.

63. *Id.* § 112.

64. *Id.* (“The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”). In addition, rules of the patent office require that the claim be a single sentence and comply with other stylistic requirements that make many patents seem impenetrable to the uninitiated. MPEP, *supra* note 47, at 608.01(m).

The invention is defined by one or more claims that form a part of the patent application.⁶⁵ If any of the claims are determined to comply with the statutory requirements, a patent may be issued covering those claims.⁶⁶ The issued patent gives its owner the right to stop others from making, using, selling, or offering to sell products incorporating the claims during the term of the patent.⁶⁷

Before it may be issued as a patent, an application for a tax strategy patent must be submitted to the USPTO, examined for compliance with the formal requirements of the statute and regulations (*e.g.*, proper form, signatures, payment of fees), classified;⁶⁸ and then forwarded to an examiner in the appropriate Examining Group⁶⁹ who will review the application for compliance with the substantive provisions of the patent statute. The examiner's review is governed by the USPTO's internal policy manual, the MPEP.⁷⁰ The application must clear one practical and six statutory hurdles in order to be issued as a patent, and an additional hurdle in order to be held valid if challenged.⁷¹

B. Hurdle 1—Delay Between Filing and Grant of a Patent

The first hurdle facing any patent applicant is the delay involved in obtaining a patent. Although the patent office has announced a long-term strategic goal of disposing of applications within eighteen months of filing,⁷² its "target" for the fiscal year 2006 was 31.3 months and the actual average pendency for the fiscal year 2005 was 31.1 months.⁷³ This hurdle is

65. 35 U.S.C. § 112. In patent law, there is an important distinction between the portion of an application that describes the prior art and the asserted advance and the portion of the application that describes what the applicant claims. MPEP, *supra* note 47, at 608.01(c)-(d). Both sections together are referred to as the "specification." *Id.* at 608.01(a). The specification must teach how to make and use the invention and is usually used to argue why the claimed invention may be distinguished from the prior art; the claims must define "the subject matter which the applicant regards as his invention." *Id.* at 608.01(k) The only portion that may be infringed is the claim. Although a patent application may provide background information and may describe the theory of operation of the claimed invention, the only constraint on competition is infringement of the claims. *See infra* Part IV.

66. 35 U.S.C. §§ 101, 151.

67. *Id.* § 271. Remedies for infringement of a patent may include: injunctions, damages, and attorney fees. *Id.* §§ 283, 284, 285.

68. A tax strategy most likely would be placed in Class 705, subclass 36T. Class 705 covers "Data processing: Financial, Business Practice, Management, or Cost/Price Determination." U.S. PATENT & TRADEMARK OFFICE, U.S. PATENT CLASSIFICATION SYSTEM—CLASSIFICATION DEFINITIONS, <http://www.uspto.gov/go/taf/def/705.htm> (last visited June 22, 2008).

69. MPEP, *supra* note 47, at 500.24. The Patent Office examining corps is organized by technology and staffed by examiners with expertise in the field. A tax strategy patent would most likely be assigned to Group 2760. The Patent Office is aware that emerging fields pose a special challenge and require special efforts to recruit and train examiners. *See supra* Part II.B.

70. MPEP, *supra* note 47, foreword.

71. 35 U.S.C. §§ 101-102, 112. This is not a complete catalog of requirements for patentability, but only those that would pose special problems for tax strategy patents.

72. U. S. PATENT & TRADEMARK OFFICE, THE 21ST CENTURY STRATEGIC PLAN 10 (2003), *available at* http://www1.uspto.gov/com/strat21/stratplan_03feb2003.pdf.

73. U.S. PATENT & TRADEMARK OFFICE, PERFORMANCE AND ACCOUNTABILITY REPORT FISCAL YEAR 2006: FINANCIAL AND PERFORMANCE HIGHLIGHTS, http://www1.uspto.gov/go/com/annual/2006/100_summary.html (last visited June 22, 2008). At midyear 2007, the average pendency for business method patents in Class 705 was fifty-four months; on average, applicants did not even receive a first substantive

particularly significant in areas of rapid obsolescence. Though the risk of obsolescence arises more typically where new technology displaces more expensive older technology or offers new features, tax strategy patents are vulnerable to the risk of obsolescence as well, because Congress or the IRS can destroy the value of a tax strategy by changing the statute or regulations at any time.⁷⁴

Moreover, tax strategy patents are likely to disclose precisely what the IRS or Congress may view as loopholes in need of closing and therefore expedite their own obsolescence.⁷⁵ Thus, the threshold question for a prospective tax strategy applicant is whether there will be any value to having a patent three or four years in the future.⁷⁶

C. Hurdle 2—Utility

In order to be patentable, an invention must be useful.⁷⁷ The threshold for utility is not high,⁷⁸ but if the invention cannot work, it will fail the utility requirement.⁷⁹ The Federal Circuit has held, in an *en banc* decision, that the Constitution limits patentability to the “purpose of advancing the useful arts—the process today called technological innovation.”⁸⁰ There is case law suggesting that inventions that depend on man-made law (as opposed to natural laws) are not statutory subject matter and therefore not patentable.⁸¹ Even if the prohibition of “law-based” patents is not absolute, the utility of a tax strategy may disappear if the law changes⁸² or if the IRS classifies it as abusive.

To some degree, the problem may be solved by creative claim-drafting. For example, a claim to a “process for reducing taxes” would face different challenges than a claim to a “process for structuring a transaction” or a “process for reporting a transaction.” The Internal Revenue Code imposes

response for forty-four months from the date of filing. COGGINS, *supra* note 25.

74. See Elizabeth Garrett, *Harnessing Politics: The Dynamics of Offset Requirement in the Tax Legislative Process*, 65 U. Chi. L. Rev. 501, 537-38 (1998) (discussing the legislative dynamics of tax loopholes).

75. *Id.*

76. There is a procedure for Accelerated Examination, which requires that the applicant conduct a patentability search, limit the number of claims, and file electronically. MPEP, *supra* note 47, at 708.02. Applications filed under this procedure receive special treatment with a goal of disposition within one year. Notice: Changes to Practice for Petitions in Patent Applications to Make Special and for Accelerated Examination, 71 Fed. Reg. 36323-24 (June 26, 2006). The program, introduced on August 25, 2006, is too new to determine whether the USPTO will meet its target. *Id.*

77. 35 U.S.C. § 101 (2000).

78. See *Steinfur Patents Corp. v. William Beyer, Inc.*, 62 F.2d 238, 240 (2d. Cir. 1932) (holding a product resulting from the practice of a process of treating new skins sufficiently new and useful).

79. *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 956 (Fed. Cir. 1983) (“[W]hen a claim requires . . . accomplishing an unattainable result . . . the claim must be held invalid under either § 101 or § 112 . . .”).

80. *Paulik v. Rizkalla*, 760 F.2d 1270, 1276 (Fed. Cir. 1985) (*en banc*).

81. See *infra* Part III.D. In the view of the USPTO, legal agreements are not patentable. See U.S. PATENT & TRADEMARK OFFICE, INTERIM GUIDELINES FOR EXAMINATION OF PATENT APPLICATIONS FOR PATENT SUBJECT MATTER ELIGIBILITY (2005), <http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>.

82. One possible justification for distinguishing between natural law and manmade law is that the former does not change.

penalties on the underpayment of taxes unless there is “substantial authority” for the taxpayer’s position⁸³ or the relevant facts “are adequately disclosed in the return and there is a reasonable basis for the tax treatment of such item by the taxpayer.”⁸⁴ In the first case, a claimed process for reducing taxes, the patent would become invalid for lack of utility if Congress changed the statute or the IRS successfully challenged the strategy;⁸⁵ the other types of claims might remain useful in light of such events.

D. Hurdle 3—Statutory Subject Matter

In order to be patentable, an invention must fit one of the four categories enumerated in 35 U.S.C. § 101, so-called “statutory subject matter.”⁸⁶ In addition, certain types of inventions that fall within the literal terms of one of the statutory categories are not patentable under judicially announced exceptions. Under current Supreme Court case law “[p]henomena 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.”⁸⁷ The dividing line is that “[w]hile a scientific truth, or the mathematical expression of it, is not a patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.”⁸⁸

The Patent Office initially interpreted Supreme Court guidance as compelling it to reject claims to inventions using mathematical algorithms as unpatentable *per se*.⁸⁹ In *In re Alappat*, the inventor had solved the problem of the jagged appearance of waveforms on oscilloscopes by varying the intensity of pixels making up the waveform display according to a formula based on the distance of the pixel from the actual waveform.⁹⁰ The examiner rejected claims as unpatentable under 35 U.S.C. § 101 “because the claim was directed to nonstatutory subject matter.”⁹¹ The Board of Patent Appeals reversed, holding that, although the claims included a mathematical algorithm, “the claim as a whole [was] directed to a machine and thus to statutory subject

83. 26 U.S.C. § 6662(d)(1) (2000).

84. *Id.* § 6662(d)(2).

85. It might be argued that invalidating the patent would impose no further injury on the patent holder once the strategy had been successfully challenged by the IRS and therefore rendered valueless. Whether a successful IRS challenge would render the patent valueless would depend on the terms of any licensing agreement the patentee had entered. Further, the mere existence of the patent might place licensees at greater risk. *See infra* Part III.H.

86. 35 U.S.C. § 101 (2000) (“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 . . .”).

87. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). Laws of nature “are part of the storehouse of knowledge . . . free to all men and reserved exclusively to none.” *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948).

88. *Diamond v. Diehr*, 450 U.S. 175, 188 (1981) (quoting *Mackay Radio & Tel. Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939)); *see also* *Corning v. Burden*, 56 U.S. 252, 268 (1854) (“It is for the discovery or invention of some practicable method or means of producing a beneficial result or effect, that a patent is granted . . .”).

89. John T. Soma et al., *Software Patents: A U.S. and E.U. Comparison*, 8 U. BALT. INTELL. PROP. L.J. 1, 15 (2000).

90. 33 F.3d 1526, 1527 (Fed. Cir 1994).

91. *Id.* at 1540.

matter . . . ”⁹² In an unusual move, an expanded Board reconsidered the case and affirmed the Examiner’s rejection, ruling “when the claim is viewed without the steps of this mathematical algorithm, no other elements or steps are found”⁹³ and therefore was not directed to statutory subject matter for two reasons: it did not describe a machine,⁹⁴ and it fell within a judicially-created exception that precluded patenting “mathematical algorithms.” The Federal Circuit reversed, holding that although the claim included a formula, the overall claimed invention was a machine.⁹⁵

[T]he Supreme Court never intended to create an overly broad, fourth category of subject matter excluded from § 101. Rather, at the core of the Court’s analysis . . . lies an attempt by the Court to explain a rather straightforward concept, namely, that certain types of mathematical subject matter, standing alone, represent nothing more than *abstract ideas* until reduced to some type of practical application, and thus that subject matter is not, in and of itself, entitled to patent protection. . . . [T]he proper inquiry in dealing with the so called [sic] mathematical subject matter exception to § 101 alleged herein is to see whether the claimed subject matter *as a whole* is a disembodied mathematical concept, whether categorized as a mathematical formula, mathematical equation, mathematical algorithm, or the like, which in essence represents nothing more than a “law of nature,” “natural phenomenon,” or “abstract idea.”⁹⁶

If so, the patenting of that subject matter is precluded. That is not the case here.

[T]he claimed invention as a whole is directed to a combination of interrelated elements which combine to form a machine for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means. This is not a disembodied mathematical concept . . . but rather a specific machine to produce a useful, concrete, and tangible result.⁹⁷

Whether claims constitute statutory subject matter is a question of law and is reviewed without deference.⁹⁸ However, as noted by Judge Newman, concurring in *In re Alappat*, “[t]he boundary between patentable and unpatentable subject matter is not always a bright line.”⁹⁹

In *In re Alappat*, the Federal Circuit recognized a certain confusion in the Supreme Court’s guidance:

The Supreme Court has not been clear . . . as to whether such subject matter is excluded from the scope of § 101 because it represents laws

92. *Id.* at 1539.

93. *Id.* at 1539-40.

94. The claim also did not fit within one of the other three statutory categories: it was not suggested that it might be a composition of matter or manufacture, and was not drafted as a process.

95. *In re Alappat*, 33 F.3d at 1544.

96. *Id.* at 1543-44 (citations omitted).

97. *Id.* at 1544 (citations omitted).

98. *AT&T Corp. v. Excel Commc’ns*, 172 F.3d 1352, 1355 (Fed. Cir. 1999).

99. *In re Alappat*, 33 F.3d at 1529 (Newman, J. concurring).

of nature, natural phenomena, or abstract ideas. The Supreme Court also has not been clear as to exactly what kind of mathematical subject matter may not be patented. The Supreme Court has used, among others, the terms “mathematical algorithm,” “mathematical formula,” and “mathematical equation” to describe types of mathematical subject matter not entitled to patent protection standing alone. The Supreme Court has not set forth, however, any consistent or clear explanation of what it intended by such terms or how these terms are related, if at all.¹⁰⁰

The Supreme Court itself noted that the “line between a ‘patentable’ process and an unpatentable ‘principle’ is not always clear.”¹⁰¹ The USPTO and Federal Circuit have announced, then abandoned, a series of shortcut tests for dividing unpatentable subject matter from patentable subject matter, including the “technological arts” test,¹⁰² the “Freeman-Walter-Abele test”;¹⁰³ the “mental step” test;¹⁰⁴ the mathematical algorithm test;¹⁰⁵ the “machine implemented” test;¹⁰⁶ and the “data transformation” test.¹⁰⁷

In *State Street* the Federal Circuit found that

100. *Id.* at 1543 n.19 (citations omitted).

101. *Parker v. Flook*, 437 U.S. 584, 589 (1978).

102. *In re Musgrave*, 431 F.2d 882 (C.C.P.A. 1970), *abrogated by* *Gottschalk v. Benson*, 409 U.S. 63 (1972).

103. *In re Freeman*, 573 F.2d 1237 (C.C.P.A. 1978); *In re Walter*, 618 F.2d 758 (C.C.P.A. 1980); *In re Abele*, 684 F.2d 902 (C.C.P.A. 1982), *abrogated by* *AT&T Corp.*, 172 F.3d at 1359 (“Whatever may be left of the earlier [Freeman-Walter-Abele] test, if anything, this type of physical limitations analysis seems of little value. . .”).

104. *Musgrave*, 431 F.2d at 893 (“We cannot agree with the board that these claims (all the steps of which can be carried out by the disclosed apparatus) are directed to non-statutory processes merely because some or all the steps therein can also be carried out in or with the aid of the human mind or because it may be necessary for one performing the processes to think.”).

105. In *Gottschalk v. Benson*, the Supreme Court held that a claim to a method of converting binary-coded decimal numbers into decimal numbers was not an “invention or discovery” under section 101, even though the claimed method was to be performed by a computer because the method had “no substantial practical application except in connection with a digital computer.” *Benson*, 409 U.S. 63, at 71. In *Flook*, the Supreme Court held that a claim to a method of updating “alarm limits” was not an “invention or discovery” under section 101 because the claimed invention amounted to the discovery of a mathematical formula that was “not the kind of ‘discovery’ that the statute was enacted to protect,” even though the calculation of the alarm limit was a component of a catalytic conversion process for the petrochemical industry and the Court assumed the formula was novel and useful. *Flook*, 437 U.S. at 593. In *Diehr*, the Supreme Court held that a claim to a process for operating a rubber-molding press was within section 101, even though one element of the claim was the calculation, by a computer, of the appropriate time to open the press. *Diehr*, 450 U.S. 175, 184 (1981). It was known that the time that rubber should remain in the mold to cure properly depended on temperature, and the claimed invention included a thermocouple for measuring temperature inside the press and feeding signals to a computer that would calculate the correct cure time (using a previously known formula) and open the press. *Id.* at 187. The Court distinguished *Flook* as not containing any “disclosure relating to the chemical processes at work, the monitoring of process variables, or the means of setting off an alarm system.” *Id.* *Diehr* did not claim the “the isolated step of ‘programming a digital computer.’” *Id.* at 193 n.15. “[E]xcluded from such patent protection are laws of nature, natural phenomena, and abstract ideas. . . . Our recent holdings in *Gottschalk v. Benson* and *Parker v. Flook*, both of which are computer-related, stand for no more than these long-established principles.” *Id.* at 185 (citations omitted).

106. The fact that a nonstatutory method is carried out on a programmed computer does not make the process claim statutory. *In re Grams*, 888 F.2d 835, 841 (Fed. Cir. 1989).

107. Merely transforming data from one value to another does not make a claim statutory. See *Benson*, 409 U.S. at 72 (holding method of converting binary-coded decimal numbers into pure binary numbers unpatentable).

the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces “a useful, concrete and tangible result” a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades [and thus satisfies the statutory subject matter requirement.]¹⁰⁸

*AT&T v. Excel Communications*¹⁰⁹ involved a patent issued for an addition of a field in a telephone billing record. As explained by the circuit court, when a caller makes a direct-dialed long-distance phone call, the system generates a record including the originating and terminating phone numbers, and the length of time of the call for billing.¹¹⁰ The patent at issue added a “primary interexchange carrier indicator” that allowed long-distance carriers to provide differential billing treatment, depending upon whether the call was to a phone with the same or a different long-distance carrier.¹¹¹ The district court held that the claims “implicitly recite a mathematical algorithm, . . . and thus fall within the judicially created ‘mathematical algorithm’ exception to statutory subject matter.”¹¹²

The Federal Circuit reversed, noting that it had held in *State Street* that a system that “takes data representing discrete dollar amounts through a series of mathematical calculations to determine a final share price - a useful, concrete, and tangible result” was patentable,¹¹³ and that, in the pending case a value was derived using a simple mathematical principle but that was

not determinative because AT&T does not claim the Boolean principle . . . AT&T is only claiming a process that uses the Boolean principle in order to determine the value of the PIC indicator. The PIC indicator represents information about the call recipient’s PIC, a useful, non-abstract result that facilitates differential billing of long-distance calls. . . . Because the claimed process applies the Boolean principle to produce a useful, concrete, tangible result without preempting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101.¹¹⁴

Although the Federal Circuit follows *State Street*, the validity of *State*

108. *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373-74 (Fed. Cir. 1998).

109. 172 F.3d 1352 (Fed. Cir. 1999).

110. *Id.* at 1354.

111. *Id.* at 1353-54. Claim 1 provided:

A method for use in a telecommunications system in which interexchange calls initiated by each subscriber are automatically routed over the facilities of a particular one of a plurality of interexchange carriers associated with that subscriber, said method comprising the steps of: generating a message record for an interexchange call between an originating subscriber and a terminating subscriber, and including, in said message record, a primary interexchange carrier (PIC) indicator having a value which is a function of whether or not the interexchange carrier associated with said terminating subscriber is a predetermined one of said interexchange carriers.

Id. at 1354 (emphasis removed).

112. *Id.* at 1355-56.

113. *Id.* at 1358.

114. *Id.*

Street, at least in its broadest construction, is not free from doubt.

The Board of Patent Appeals and Interferences, the Patent Office's internal reviewing authority, continues to affirm examiner rejections of certain business method claims,¹¹⁵ and at least one administrative patent judge considers "[t]he quest for a bright line test for determining whether a claimed invention embodies statutory subject matter under 35 U.S.C. § 101 . . . an exercise in futility."¹¹⁶ In *Ex parte Bilski*, an administrative appeal of the rejection of claims to a method for hedging risk,¹¹⁷ the applicant asserted that "energy consumers face two kinds of risk: price risk and consumption risk" and that "consumption risk (e.g., the need to use more or less energy than planned due to the weather) is said to be not currently managed in energy markets, which is the problem addressed by the invention," but admitted "that the steps of the method need not be performed on a computer."¹¹⁸ The examiner rejected the claims as nonstatutory, finding that no specific apparatus was disclosed and therefore, "'the claims are non-statutory, because they are directed solely to an abstract idea and solve a purely mathematical problem without practical application in the technological arts.' Therefore, the final rejection relies on both the 'abstract idea' exclusion and a 'technological arts' test for statutory subject matter."¹¹⁹ The Board characterized the claims as "'non-machine-implemented' method claims, i.e., the claims do not recite how the steps are implemented and are broad enough to read on performing the steps without any machine or apparatus."¹²⁰ In the Board's view, this took the case beyond the holding of *State Street* and *AT&T v. Excel*, cases that the Board viewed as involving the "special case" of transformation of data by a machine.¹²¹

Noting that "the bounds of patentable subject matter are increasingly

115. Examination Guidelines for Computer-Related Inventions, 61 Fed. Reg. 7478, 7479 (Feb. 28, 1996). The USPTO draws the line as follows: Although abstract ideas, natural phenomena, and laws of nature are not eligible for patenting, methods and products employing abstract ideas, natural phenomena, and laws of nature to perform a real-world function may well be. *Id.*

116. *Ex parte Bilski*, Appeal No. 2002-2257, 2006 Pat. App. LEXIS 51, at *80 (B. Pat. App. & Interferences 2006). (McQuade, J., concurring).

117. *Id.* at *1-2. Claim 1 provided:

A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:

(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;

(b) identifying market participants for said commodity having a counter-risk position to said consumers; and

(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

Id.

118. *Id.* at *2, 4.

119. *Id.* at *3-4 (citations omitted).

120. *Id.* at *6.

121. *Id.* at *6-7; see *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352, 1354 (Fed. Cir. 1999) (regarding a "Call Message Recording for Telephone Systems patent," which aids long-distance carriers in providing differential billing treatment for subscribers); see also *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1370 (Fed. Cir. 1999) (regarding data processing system for implementing an investment structure)

being tested” and that “[i]n recent years, the USPTO has been flooded with claims to ‘processes,’ many of which bear scant resemblance to classical processes of manipulating or transforming compositions of matter or forms of energy from one state to another [including] claims to methods of meditation, dating, physical sports moves, etc”¹²² The Board affirmed the rejections.

The Supreme Court declined a recent opportunity to resolve the issue, although a dissenting opinion indicates that the scope of patentability of business methods is not completely settled. In *Laboratory Corporation of America v. Metabolite Labs*, the applicant claimed a process for diagnosing vitamin deficiency,¹²³ which consisted of testing a blood sample for elevated levels of homocysteine and then “noticing whether its level is elevated above the norm.”¹²⁴ The patent office allowed the claim and a district court upheld a jury verdict that the patent was valid and infringed.¹²⁵ The Federal Circuit affirmed.¹²⁶ The Supreme Court granted certiorari to determine whether the patent claim is invalid on the ground that it improperly seeks to “claim a monopoly over a basic scientific relationship,” namely, the relationship between homocysteine and vitamin deficiency.”¹²⁷ The Court dismissed the writ as improvidently granted, with three justices dissenting.¹²⁸

In dissent, Justice Breyer argued that the writ should not have been dismissed because of the importance of resolving the patentability of such processes and because

this case is not at the boundary. It does not require [the Supreme Court] to consider the precise scope of the ‘natural phenomenon’ doctrine or any other difficult issue. In [Justice Breyer’s] view, claim 13 is invalid no matter how narrowly one reasonably interprets that doctrine. There can be little doubt that the correlation between homocysteine and vitamin deficiency set forth in claim 13 is a ‘natural phenomenon.’¹²⁹

The dissent explains the philosophy behind exclusion of laws of nature from patentable subject matter:

The relevant principle of law “[e]xclude[s] from . . . patent protection . . . laws of nature, natural phenomena, and abstract ideas.

. . .

122. *Ex parte Bilski*, 2006 Pat. App. LEXIS, at *7-8.

123. 126 S. Ct. 2921, 2922 (2006) (Breyer, J., dissenting). A representative claim provided: “A method for detecting a deficiency of cobalamin or folate in warm-blooded animals comprising the steps of: assaying a body fluid for an elevated level of total homocysteine; and correlating an elevated level of total homocysteine in said body fluid with a deficiency of cobalamin or folate.” *Id.* at 2924. The inventors testified that the correlating step consisted simply of recognizing that an elevated homocysteine level—by that very fact—shows the patient likely has a vitamin deficiency and that, “because the natural relationship between homocysteine and vitamin deficiency was now well known, such ‘correlating’ would occur automatically in the mind of any competent physician.” *Id.*

124. *Id.* at 2921.

125. *Id.*

126. *Id.* at 2925.

127. *Id.*

128. *Id.* at 2922.

129. *Id.* at 2927.

The justification for the principle does not lie in any claim that “laws of nature” are obvious, or that their discovery is easy, or that they are not useful. To the contrary, research into such matters may be costly and time-consuming; monetary incentives may matter; and the fruits of those incentives and that research may prove of great benefit to the human race. Rather, the reason for the exclusion is that sometimes *too much* patent protection can impede rather than “promote the Progress of Science and useful Arts,” the constitutional objective of patent and copyright protection.

...

The problem arises from the fact that patents do not only encourage research by providing monetary incentives for invention. Sometimes their presence can discourage research by impeding the free exchange of information.

...

Thus, the Court has recognized that “[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are . . . the basic tools of scientific and technological work.” It has treated fundamental scientific principles as “part of the storehouse of knowledge” and manifestations of laws of nature as “free to all men and reserved exclusively to none.” And its doing so reflects a basic judgment that protection in such cases, despite its potentially positive incentive effects, would too often severely interfere with, or discourage, development and the further spread of useful knowledge itself.”¹³⁰

Of particular importance, the dissent questions the validity of *State Street*:

That case does say that a process is patentable if it produces a “useful, concrete, and tangible result.” But this Court has never made such a statement and, if taken literally, the statement would cover instances where this Court has held the contrary. The Court, for example, has invalidated a claim to the use of electromagnetic current for transmitting messages over long distances even though it produces a result that seems “useful, concrete, and tangible.” Similarly the Court has invalidated a patent setting forth a system for triggering alarm limits in connection with catalytic conversion despite a similar utility, concreteness, and tangibility. And the Court has invalidated a patent setting forth a process that transforms, for computer-programming purposes, decimal figures into binary figures—even though the result would seem useful, concrete, and at least arguably (within the computer’s wiring system) tangible.¹³¹

130. *Id.* at 2922-23 (citations omitted).

131. *Id.* at 2928 (emphasis added) (citations omitted).

1. Patentability of Business Methods

In one sense, there is a special category of inventions known as “business method patents.”¹³² However, for purposes of determining patentability, and the USPTO’s examination of applications, there is no such category.¹³³ “Office 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”¹³⁴

Doubt as to the patentability of business methods was alleviated by the Federal Circuit in *State Street*. The patent office issued a patent to Signature on “Data Processing System for Hub and Spoke Financial Services Configuration.”¹³⁵

In essence, the system . . . facilitates a structure whereby mutual funds (Spokes) pool their assets in an investment portfolio (Hub) organized as a partnership. This investment configuration provides 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.¹³⁶

Unable to license the patented invention, *State Street* sought a declaratory judgment that the patent was invalid.¹³⁷ The district court granted summary judgment that the patent was invalid as not meeting the statutory subject matter requirement of 35 U.S.C. § 101.¹³⁸ The Federal Circuit reversed, holding that the patent was directed to statutory subject matter, a machine.¹³⁹

Citing the 1980 Supreme Court decision in *Diamond v. Chakrabarty*, the court held that the “repetitive use of the expansive term ‘any’ in § 101 shows Congress’s intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in § 101.”¹⁴⁰ The Federal Circuit went on to note three categories of subject matter that the Supreme Court had held unpatentable: laws of nature, natural phenomena, and abstract ideas.¹⁴¹

132. The patent statute provides exemptions from what would otherwise be infringement in the case of business method patents. See *infra* Part IV.

133. See 35 U.S.C. § 101 (2000) (enumerating the four categories of patentable inventions: machines, manufactures, compositions of matter and processes.); MPEP, *supra* note 47, at 706.03(a) (describing guidelines for subject matter rejections).

134. U.S. PATENT & TRADEMARK OFFICE, EXAMINATION GUIDELINES FOR COMPUTER-RELATED INVENTIONS 1 (1996).

135. U.S. Patent No. 5,193,056 (filed Mar. 11, 1991).

136. *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1370 (Fed. Cir. 1998).

137. *Id.*

138. *Id.*

139. The Federal Circuit held that sufficient structure was recited in the application to constitute a machine, but went on to evaluate the district court’s holding that the claims fell under a judicial exception to statutory subject matter, either the “mathematical algorithm” exception or the “business method” exception. *Id.* at 1371.

140. *Id.* at 1373 (citing *Diamond v. Chakrabarty*, 447 U.S. 303, 308-09 (1980)). The court also noted that “[t]he Committee Reports accompanying the 1952 Act inform us that Congress intended statutory subject matter to ‘include anything under the sun that is made by man.’” *Id.* at 1374 n.3.

141. *Id.* at 1373 (citing *Diamond v. Diehr*, 450 U.S. 175, at 185 (1981)).

The Federal Circuit then explained the difference between unpatentable mathematical algorithms and patentable machines or methods:

Unpatentable mathematical algorithms are identifiable by showing they are merely abstract ideas constituting disembodied concepts or truths that are not “useful.” From a practical standpoint, this means that to be patentable an algorithm must be applied in a “useful” way. In *Alappat*, we held that data, transformed by a machine through a series of mathematical calculations to produce a smooth waveform display on a rasterizer monitor, constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced “a useful, concrete and tangible result”—the smooth waveform.

Similarly, in *Arrhythmia Research Technology Inc. v. Corazonix Corp.*, . . . we held that the transformation of electrocardiograph signals from a patient’s heartbeat by a machine through a series of mathematical calculations constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it corresponded to a useful, concrete or tangible thing—the condition of a patient’s heart.¹⁴²

The court applied this rule by holding that

the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces “a useful, concrete and tangible result”—a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.¹⁴³

The court rejected the argument that there was a judicially-created “business method” exception to patentable subject matter.¹⁴⁴ “We take this opportunity to lay this ill-conceived exception to rest . . . The business method exception has never been invoked by this court . . . to deem an invention unpatentable.”¹⁴⁵

2. *Are Tax Strategies Business Methods?*

Under current USPTO guidelines, a claim to a specific business process would meet the requirements of statutory subject matter, as it would be one of the categories of inventions covered by the patent statute.¹⁴⁶ It is an open question whether such a process would qualify as statutory subject matter under Supreme Court precedent—the Court has not addressed the issue, and

142. *Id.*

143. *Id.*

144. *Id.* at 1377.

145. *Id.* at 1375

146. MPEP, *supra* note 47, at 2106.

the Breyer dissent language suggests that at least some justices have questions.¹⁴⁷

There is, however, a possible distinguishing characteristic of tax strategy patents: they depend on legislation. One possible consequence of this distinction is that even if the strategy satisfies the statutory subject matter requirement of §101, it may fail the utility requirement.¹⁴⁸ Moreover, there is authority at the Federal Circuit level suggesting that legal agreements fail the statutory subject matter requirement.¹⁴⁹

In re Comiskey involved a method for mandatory arbitration involving legal documents, such as wills or contracts.¹⁵⁰ The examiner rejected the application as obvious.¹⁵¹ The Federal Circuit stated that “we do not reach the ground relied on by the Board below—that the claims were unpatentable as obvious . . . because we conclude that many of the claims are ‘barred at the threshold by § 101.’”¹⁵² Reaffirming the decision in *State Street* that patentability does “not turn on whether the claimed subject matter does ‘business’ instead of something else,”¹⁵³ the court also noted that *State Street* “explicitly held that business methods are ‘subject to the same legal requirements for patentability as applied to any other process or method.’”¹⁵⁴

The court held that, *Comiskey* having conceded that the claims at issue did not require a machine, the claims were to the mental process of resolving a legal dispute between two parties by the decision of a human arbitrator and not patentable subject matter.¹⁵⁵ Thus, an applicant for a tax strategy patent would face uncertainty as to whether the category itself is, in fact, patentable.

E. Hurdle 4—Novelty

Since the first patent statute, patents have been available to novel inventions only, a requirement reflected in sections 101 and 102 of the current statute.¹⁵⁶ Patents are intended to provide an incentive to add to the public domain.¹⁵⁷ Therefore, a patent cannot be granted on something which is

147. See *Lab. Corp. of Am. Holdings v. Metabolite Lab., Inc.*, 548 U.S. 124, 134-39 (2006) (Breyer, J., dissenting) (discussing whether specific business processes are or should be covered by the patent statute).

148. See *supra* Part III.C (discussing the utility requirement).

149. See *supra* Part III.D (discussing the statutory subject matter requirement).

150. 499 F.3d 1365 (Fed. Cir. 2007).

151. *Id.* at 1368.

152. *Id.* at 1371.

153. *Id.* at 1374.

154. *Id.*

155. *Id.* at 1379. The court did, however, consider other claims separately. “They recite the use of ‘modules,’ including ‘a registration module for enrolling’ a person, ‘an arbitration module for incorporating arbitration language,’ and ‘an arbitration resolution module for requiring a complainant [or party] to submit a request for arbitration resolution to the mandatory arbitration system.’” *Id.* “When an un-patentable mental process is combined with a machine, the combination may produce patentable subject matter, as the Supreme Court’s decision in *Diehr* and our own decisions in *State Street* and *AT&T* have confirmed.” *Id.* The court therefore remanded those claims to determine if they met the remaining requirements for patentability. *Id.* at 1381.

156. See 35 U.S.C. §§ 101-02 (2000) (explaining who may obtain a patent and the conditions for patentability).

157. JOHN GLADSTONE MILLS III ET AL., *PATENT LAW FUNDAMENTALS* §1:24 (2d ed. 2008).

already in the prior art.¹⁵⁸

The prior art consists of information¹⁵⁹ that was available to the public prior to the applicant's date of invention¹⁶⁰ and information that was available to the public more than a year prior to the applicant's priority date.¹⁶¹ The information may have become public through a patent application, through a publication in a journal, through presentation at a conference, or through use of the claimed invention, among other routes.

In addition, patent policy discourages use of the claimed invention by the inventor for any significant period before filing an application. In *Metallizing Engineering Co., Inc. v. Kenyon Bearing & Auto Parts Co., Inc.*,¹⁶² the Second Circuit traced the early history and policy behind the public use bar:

So far as we can find, the first case which dealt with the effect of prior use by the patentee was *Pennock v. Dialogue*, in which the invention had been completed in 1811, and the patent granted in 1818 for a process of making hose by which the sections were joined together in such a way that the joints resisted pressure as well as the other parts. It did not appear that the joints in any way disclosed the process; but the patentee, between the discovery of the invention and the grant of the patent, had sold 13,000 feet of hose; and as to this the judge charged: "If the public, with the knowledge and tacit consent of the inventor, be permitted to use the invention, without opposition, it is a fraud on the public afterwards to take out a patent." The Supreme Court affirmed a judgment for the defendant, on the ground that the invention had been "known or used before the application." "If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should . . . make and sell his invention publicly, and thus gather the whole profits, . . . it would materially retard the progress of science and the useful arts" to allow him fourteen years of legal monopoly "when the danger of competition should force him to secure the exclusive right". In *Shaw v. Cooper* the public use was not by the inventor, but he had neglected to prevent it after he had learned of it, and this defeated the patent. "Whatever may be the intention of the inventor, if he suffers his invention to go into public use, through any means whatsoever, without an immediate assertion of his right, he is not entitled to a patent".¹⁶³

"Public use" of a claimed invention under section 102(b) has been

158. 35 U.S.C. § 102.

159. There are two categories of information that form the patent public domain: printed publications and patents anywhere in the world qualify, but other acts must occur in the United States in order to qualify. *Id.* § 102(a)-(b).

160. *Id.* § 102.

161. The priority date is usually the date of the first application filed by the applicant that describes the claimed invention, provided certain technical requirements are met. University of Cincinnati, Intellectual Property Office, Patent FAQs, <http://www.ipu.uc.edu/index.cfm?fuseaction=overview.faq> (last visited Apr. 9, 2008).

162. 153 F.2d 516 (2d Cir. 1946).

163. *Id.* at 518 (citations omitted).

defined as any use of that invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor.¹⁶⁴ Tax returns are confidential by law.¹⁶⁵ However, the duty to maintain the confidentiality of the return runs to the taxpayer, not the tax adviser.¹⁶⁶ Thus, filing a tax return that discloses the tax strategy sought to be patented would create prior art available to defeat a subsequent patent application.¹⁶⁷

There is an exception for experimental use of an invention by or under control of the inventor in order to perfect the invention,¹⁶⁸ but that exception is unlikely to apply to tax strategy patents.¹⁶⁹

F. Hurdle 5—Non-Obviousness

In one sense, the novelty of tax strategy patents may be the easiest hurdle to clear. Every time the tax law changes, there are new opportunities to do things that have never been done before in exactly the same way. The more difficult hurdle is obviousness. The standard is set by 35 U.S.C. § 103.¹⁷⁰ Things that would be obvious to others of ordinary skill in the relevant field are not patentable. As explained in *Graham v. John Deere*:¹⁷¹

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined.¹⁷²

In *KSR International v. Teleflex*, the Supreme Court reviewed a holding that claims were patentable under a bright-line test developed by the Federal Circuit.¹⁷³ The patent office had issued the patent, but at trial the district court found little difference between the prior art and the claimed invention, and therefore invalidated the patent as obvious.¹⁷⁴ The Federal Circuit reversed, holding that the District Court failed to make ““findings as to the specific

164. 35 U.S.C. § 102(b). *Egbert v. Lippmann*, 104 U.S. 333, 336 (1881).

165. I.R.C. § 6103(a) (2000).

166. See *Alpert v. Riley*, No. H-04-CV-3774, 2007 U.S. Dist. LEXIS 22950 (S.D. Tex. 2007) (finding attorney not liable for disclosing tax information under § 6103 because they are not government employees).

167. An interesting issue would be posed by the question whether the IRS' knowledge would be enough to satisfy the public use trigger. The issue could be avoided by filing the patent application before filing the first return using the claimed invention.

168. See *Elizabeth v. Pavement Co.*, 97 U.S. 128, 135 (1877) (“[S]uch use is not a public use . . . so long as the inventor engaged, in good faith, in testing its operation.”).

169. It is difficult to identify an area of experimentation that is needed to perfect a tax strategy invention.

170. 35 U.S.C. § 103 (2000) (“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.”).

171. 383 U.S. 1 (1966).

172. *Id.* at 17.

173. See *KSR Int'l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1734 (2007) (stating that under the “teaching, suggestion, or motivation” (TSM) test, a patent claim is deemed obvious only “if ‘some motivation or suggestion to combine the prior art teachings’ can be found in the prior art, the nature of the problem, or the knowledge of a person having ordinary skill in the art.”).

174. *Teleflex Inc. v. KSR Int'l*, 298 F. Supp. 2d 581, 596 (E.D. Mich. 2003).

understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of [the] invention” to combine the references.¹⁷⁵ The Supreme Court, agreeing with the trial court, reversed again.¹⁷⁶ “Throughout this Court’s engagement with the question of obviousness, our cases have set forth an expansive and flexible approach inconsistent with the way the Court of Appeals applied its TSM test here.”¹⁷⁷

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. . . . Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility.¹⁷⁸

The obviousness of a tax strategy patent would be measured from the perspective of a tax practitioner—either a CPA or a tax lawyer—given the normal training of such a person and the normal knowledge of the relevant law, resources and techniques used in the field of tax planning.¹⁷⁹ Under *In re Winslow*,¹⁸⁰ this hypothetical practitioner would be presumed to know all of the relevant prior art, which would (at a minimum) include legislative history and IRS regulations and positions.¹⁸¹

Thus, strategies that did nothing more than implement statutory objectives could not pass the obviousness hurdle.¹⁸² Implementing a strategy using a computer program might help with the issue of statutory subject matter but could hardly be considered a non-obvious step in the field of tax planning.¹⁸³

G. Hurdle 6—Written Description and Best Mode

The patent statute requires that an applicant describe how to make and use the invention, and also disclose what the applicant believes to be the best mode for carrying out the invention, referred to as the “enablement” and “best mode”

175. *Teleflex Inc. v. KSR Int’l*, No. 04-1152, 2005 WL 23377, at *5 (5th Cir. Jan. 6, 2005).

176. *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007).

177. *Id.* at 1739.

178. *Id.* at 1741.

179. *See* 35 U.S.C. § 103 (2000).

180. *In re Winslow*, 365 F.2d 1017 (C.C.P.A. 1965).

181. *See id.* at 1578 (“[S]ection 103 requires us to presume full knowledge by the inventor of the prior art in the field of his endeavor.”).

182. Earlier Federal Circuit cases that required publications to provide a teaching, suggestion or motivation to combine pre-existing references to arrive at the claimed invention were severely criticized in *KSR Int’l Co. v. Teleflex*. *KSR Int’l Co.*, 127 S. Ct. at 1743. Under the *KSR* test, showing that a tax strategy would be obvious to a tax practitioner given the legislative history, or even showing that the strategy would be consistent with congressional intent would be sufficient to render a tax strategy patent obvious. *See id.* at 1740 (“[W]hen a patent ‘simply arranges old elements’ . . . and yields no more than one would expect from such arrangement, the combination is obvious.”).

183. *See Leapfrog Enter., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007) (“Accommodating a prior art . . . device . . . to modern electronics would have been reasonably obvious” because “[a]pplying modern electronics to older . . . devices has been commonplace in recent years.”); *In re Venner*, 262 F.2d 91, 95 (C.C.P.A. 1958) (automating previously known steps is not patentable).

requirements, respectively.¹⁸⁴ The enablement requirement is designed to assure that, in return for the limited term monopoly that a patent confers, the public gets access to sufficient information to practice the invention once the term has expired.¹⁸⁵ The best mode requirement is designed to prevent an applicant from disclosing a theoretically feasible way of implementing the invention while concealing preferable ways of doing so.¹⁸⁶ In other words, “best mode” would require a tax strategy applicant to describe how they would advise clients to use the strategy.¹⁸⁷

When the patent is issued the entire application and any correspondence are made public.¹⁸⁸ This ordinarily poses little problem for patent owners since competitors are unable to use the patented invention during the term of the patent.¹⁸⁹ However, tax strategy patents are a special case. There is one party that might destroy the value of the patent without using the invention: the IRS. Once the strategy is disclosed in sufficient detail to enable one of ordinary skill in the art to practice it (as required by §112), the IRS will be alerted to the potential lost revenue. Unlike competitors (other tax planners and taxpayers), the IRS can respond to this loss of revenue without making, using, or selling the strategy covered by the patent; by ruling that the strategy is abusive or successfully lobbying for a change in the statute, the IRS would destroy the value of the patent without infringing.¹⁹⁰

As demonstrated above, a strategy that merely carries out Congressional intent will be unpatentable as lacking novelty or being obvious.¹⁹¹ Therefore, presumably the patent at issue will be directed toward a result which, at best, is not consistent with that intent. Since the application must disclose not only how to implement the strategy but also what the applicant considers the best way to carry it out, it will paint a clear target for the IRS. The IRS does not need to infringe the patent to destroy its value—it can adopt regulations making use of the strategy unacceptably risky or it can lobby Congress to

184. 35 U.S.C. § 112 (“The specification shall contain a written description of the invention . . . and shall set forth the best mode contemplated by the inventor of carrying out his invention.”).

185. *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir. 2003).

186. *In re Gay*, 309 F.2d 769, 772 (C.C.P.A. 1962).

187. This would place a practitioner in a difficult position if she were to advise a client to follow a course not set out in the application, which could lead to patent invalidity and malpractice.

188. The patent statute provides for publication of applications eighteen months after the application is filed, which is generally prior to the patent’s being granted. 35 U.S.C. § 122(b)(1). An applicant can affirmatively opt out of pre-grant publication by agreeing not to file patent applications in any other country that requires pre-grant publication. *Id.* § 122(b)(2)(B)(i). Presumably, most tax strategy patents’ value would be fully realized within the jurisdiction of the United States and there would be little additional value to foreign patent applications. In this case, a well-advised tax strategist would file only in the United States and would request that the application not be published before the patent is granted. This would defer alerting competitors who might otherwise make use of the strategy before the patent is issued (*see infra* Part V) and the IRS, which might otherwise move to defeat the strategy as soon as possible (quite possibly before the patent even issued). *See supra* Part III.B.

189. *See generally* 35 U.S.C. § 271 (containing the statutory definition of patent infringement).

190. Infringement is limited to making, using, or selling the patented invention. *Id.* It may be objected that the IRS or Congress might choose not to spend the time to render the patented tax strategy worthless. That objection, however, goes more to the question whether the problem is even serious enough to require legislative action than to whether the solution should be the amendment of the patent statute.

191. *See supra* Parts III.F, III.G.

amend the tax statute to make the strategy unworkable.¹⁹²

Of perhaps greater practical importance, the patent application must identify the inventor and, if the patent has been transferred (for example, to the practitioner's firm), the transfer must be recorded to be effective.¹⁹³ This could place the practitioner's clients at greater risk of audit or greater scrutiny simply by virtue of association with the assignee of a tax strategy patent. As the statute of limitations for examining tax returns is seven years, even clients who made use of the strategy before the patent was issued would be at risk.

H. Hurdle 7—Fatal Delay

One of the objectives of the patent system is to provide incentives to place technology in the public domain promptly.¹⁹⁴ The statute provides such incentives in sections 102(b) and 103, which provide, in effect, a statute of limitations of one year, running from the time that someone (the applicant included) has made the invention public.¹⁹⁵ In addition, the patent statute denies patentability to applicants who have abandoned, suppressed or concealed their inventions.¹⁹⁶

The courts have consistently held that an invention, though completed, is deemed abandoned, suppressed, or concealed if, within a reasonable time after completion, no steps are taken to make the invention publicly known. Thus, failure to file a patent application; to describe the invention in a publicly disseminated document; or to use the invention publicly, have been held to constitute abandonment, suppression or concealment.¹⁹⁷

In other words, the creator of a tax strategy patent runs a risk by using the strategy in practice for a significant period before filing a patent application.¹⁹⁸ Some tax practitioners attempt to control access to their planning techniques by requiring clients to sign confidentiality agreements.¹⁹⁹ Though the length of time required to establish the bar is a question of fact, based on the nature and

192. As discussed at Part III.C *supra*, this would also render the patent invalid.

193. 35 U.S.C. § 261 ("An assignment, grant, or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.").

194. *See, e.g., id.* § 200 (disclosing the various objectives of the patent system with respect to federally funded research).

195. *Id.* §§ 102, 103.

196. *Id.* § 102. Section 102 provides:

A person shall be entitled to a patent unless . . . (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 . . . (g) . . . (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, 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.

Id.

197. *Int'l Glass Co. v. U.S.*, 408 F.2d 395, 403 (Ct. Cl. 1969) (citations omitted).

198. *Id.*

199. *See, e.g.*, 67 Fed. Reg. 64,799 (Oct. 22, 2002) (discussing confidential transactions).

extent of activity from reduction to practice to filing the patent application,²⁰⁰ attempting to profit from an invention in this fashion is a classic invitation to a rejection based on suppression or concealment.

There is an “experimental use” exception, designed to permit limited public use or sale if necessary in order to perfect the invention,²⁰¹ but it is difficult to see how the exemption could apply to tax strategy patents.²⁰² To successfully establish entitlement to this exception, the applicant would need to demonstrate that experimentation was necessary to perfect the invention, and that the experimentation required public use or sale.²⁰³ Such an argument would appear inconsistent with the IRS regulations requiring a good faith belief in the correctness of the position being taken.²⁰⁴

I. Hurdle 8—Post Issue Challenges

All of the above hurdles relate to the difficulty of getting a patent issued quickly enough to be of any value. They are not meant to be an exhaustive review of the process of obtaining a patent, but rather a catalog of special issues that would be faced with respect to tax strategy patents. For completeness, one more category of hurdles should be mentioned.

Once issued, a patent is presumed valid.²⁰⁵ That presumption is rebuttable, and there are several avenues for challenging an issued patent.²⁰⁶ If any party succeeds in invalidating an issued patent through any of these avenues, the patent is invalid as to all parties.²⁰⁷

1. Reexamination

The patent statute allows any party to request that the patent office reconsider its decision to issue a patent, by filing a request for

200. See *Dewey v. Lawton*, 347 F.2d 629, 632 (C.C.P.A. 1965) (holding that “testing and refinement” for more than a year did not constitute concealment); *Frey v. Wagner*, 87 F.2d 212, 215 (C.C.P.A. 1937) (“The law does not punish an inventor for attempting to perfect his process before he gives it to the public.”). Although abandonment, suppression, or concealment does not arise solely by delay, delay provides a basis for an inference of intent to abandon, suppress, or conceal. See *Shindelar v. Holdeman*, 628 F.2d 1337 (C.C.P.A. 1980), *cert. denied*, 451 U.S. 984 (1981) (stating that a two year and five months delay is also unreasonably long); *Peeler v. Miller*, 535 F.2d 647 (C.C.P.A. 1976) (stating that a four year delay is *prima facie* unreasonably long)

201. *City of Elizabeth v. Am. Nicholson*, 97 U.S. 126, 135 (1877).

202. It would take an exceptionally brave practitioner to argue that experimentation was necessary to perfect the strategy by filing returns to see if the IRS would challenge them.

203. See, e.g., *Allied Colloids, Inc. v. Am. Cyanamid Co.*, 64 F.3d 1570, 1576 (Fed. Cir. 1995) (discussing the requirements of experimental use).

204. In addition, the validity of a reporting position could be “experimentally” tested by requesting an IRS Letter Ruling. See IRS Bulletin 2007-1, at 118, available at <http://www.irs.gov/pub/irs-irbs/irb07-01.pdf>. It would be difficult to qualify for the experimental use exception.

205. 35 U.S.C. § 282 (2000) (“A patent shall be presumed valid.”).

206. There are also avenues for resisting the grant of a pending patent application. The assumption has been made, however, that careful practitioners will avoid pre-grant publication. Therefore, opportunities for pending application challenges will be extremely limited.

207. *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 330-51 (1971) (stating that a holding of patent invalidity by one court may be asserted by an infringement defendant in another case).

reexamination.²⁰⁸ The process is more abbreviated than the initial examination process, and the types of materials that may be considered are limited²⁰⁹.

2. Declaratory Judgment of Invalidity

Any party meeting constitutional standing requirements may challenge an issued patent through a declaratory judgment action.²¹⁰

3. Infringement Defense

One of the defenses available to a defendant in an infringement action is the invalidity of the patent.²¹¹ Thus, although an issued patent, as a decision of an expert administrative agency within the area of its expertise, is presumed valid,²¹² the presumption is rebuttable. Any of the hurdles overcome in obtaining a patent are open for reconsideration in defense of an infringement action.

IV. THE RIGHTS OF A TAX STRATEGY PATENT OWNER

Once an application is allowed and issues as a patent, its owner has the right to stop competitors from making, using, selling, or importing the patented invention for a period of twenty years from the date the patent application was filed.²¹³ With respect to a tax strategy patent, this would translate into two significant rights: rights against other tax advisers who use the invention to advise clients; and rights against taxpayers who use the invention to structure transactions or file tax returns. Thus, potential defendants include the actual taxpayer, lawyers, and accountants.

The rights include the right to recover damages, which by statute, are to be no less than a reasonable royalty,²¹⁴ and which in practice rarely exceed that measure.²¹⁵ Injunctions are also available,²¹⁶ although not automatic.²¹⁷ In

208. 35 U.S.C. § 301 (“Any person at any time may cite to the Office in writing prior art consisting of patents . . . which that person believes to have bearing on the patentability of any claim of a particular patent.”). The term “third-party requester” means a person requesting ex parte reexamination under section 302 or inter partes reexamination under section 311 who is not the patent owner. *Id.* §§ 302, 311.

209. Only printed documents may be submitted. *Id.* §§ 301, 302.

210. *See* 28 U.S.C. §§ 2201-2202 (2000) (stating that declaratory judgments may be used in case of an actual case or controversy); *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 927 F. Supp. 502 (D. Mass. 1996).

211. 35 U.S.C. § 282.

212. *Id.*

213. The term of a U.S. patent is currently twenty years from the date the earliest application is filed (i.e., if there are a series of related patent applications, referred to as “continuing applications,” the term is measured from the first one filed), and is subject to adjustment in certain circumstances related to delays in processing by the USPTO. *Id.* § 154.

214. *Id.* § 284.

215. *See Third Wave Tech., Inc. v. Stratagene Corp.*, 405 F. Supp. 2d 991, 1101 (W.D. Wis. 2005) (noting fact that in setting damages according to § 284, courts “imagine a negotiation between the patentee and infringer taking place at the moment the infringement began” which “is an approach that experts have employed for decades in patent cases.”).

216. 35 U.S.C. § 283 (“[C]ourts may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.”).

addition, in cases of willful infringement, recovery of attorney fees is authorized.²¹⁸

The “invention” is not the underlying strategy; it is the “claimed invention,” i.e., limited by the terms set forth in the claim section of the patent. Note that this means that others could publish articles describing the patented techniques, lobby for changes to the tax statute or regulations or find other ways to accomplish the same objectives. None of these activities fall within the exclusive rights of a patent holder.

V. THE VALUE OF A TAX STRATEGY PATENT

Taking into account all of the above hurdles, the value of a tax strategy patent appears to be close to zero. To have any significant value, in addition to being a workable strategy that has economic value, it would need to have three characteristics:

1. Because of the significant delays in processing patent applications, it would need to have value over a period of at least three years (the average time required for USPTO review of an application prior to issuing a patent). Remedies for patent infringement generally run from the time the patent is issued, so any strategy that ceased to be effective before the patent issued would be impossible to license.²¹⁹

2. Assuming that the application was filed in the United States only²²⁰ (a reasonable, but not necessarily universally applicable assumption), the contents could be kept secret until the patent issued. However, once the patent issued, the strategy would be fully disclosed, giving the IRS a clear picture of how any loopholes might be used. Therefore, it would need to have value notwithstanding the IRS’s knowledge of its use.

3. Finally, to be valuable, an application would need to meet both of two inconsistent requirements: it must be non-obvious to clear the patent hurdle, and it must be sufficiently consistent with Congressional intent to survive the disclosure, which the patent statute requires.²²¹

If the strategy is consistent with Congressional intent (as evidenced by the statute, regulations, legislative history and pre-application commentary by others) it is difficult to see how the application could survive the obviousness

217. *See id.* § 287 (requiring a patent holder to notify the public generally or an infringer specifically in order to collect damages from that infringer); *eBay, Inc., v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (indicating that, even in patent cases, the traditional equitable four factor test must be satisfied before a court grants an injunction).

218. 35 U.S.C. § 285.

219. The one possible licensing avenue—licensing trade secret information—would be foreclosed upon the publication or issue of the patent because the information would no longer be confidential.

220. If foreign applications were filed, the U.S. application would be subject to pre-grant publication approximately eighteen months after the patent application has been filed. 35 U.S.C. § 122(b)(1). Publication of the application does not constitute the grant of a patent, and therefore does not give the applicant the right to sue for infringement, although it does trigger certain rights that may be enforced if the patent does issue with substantially the same claims as those that are published.

221. 35 U.S.C. §§ 103, 112.

hurdle²²²

On the other hand, if the strategy is meant to subvert congressional intent, it will need to meet two requirements: it will need to be “adequately disclosed in the return” and have a “reasonable basis” for the tax treatment claimed; and it will need to be accepted by the IRS notwithstanding the assumed inconsistency with congressional intent.²²³ In this case, because the patent must disclose how to make and use the invention, and the inventor’s best contemplated mode of implementing it,²²⁴ both the IRS and Congress will have a blueprint for promulgating regulations or proposing legislative corrections. The IRS will also have a guide to look for signs of use of the strategy, which includes not only the strategy itself, but also the knowledge of which preparer invented it and who it was assigned to.²²⁵ This paints a bright target for the IRS, identifying both the strategy to look for and the group of taxpayers most likely to have used the strategy. In short, a tax strategy patent with a value much above zero should be a rare event.

VI. CONCLUSION AND RECOMMENDATIONS

Before dismissing the danger of tax strategy patents solely on the basis that they are likely to have no value, the remaining concerns expressed in the introduction to the Levin bill and by the tax bar should be considered.²²⁶ Those concerns can be summarized as:

1. There is no need for incentives in this field.
2. Patents issued for aggressive tax strategies may enable unscrupulous promoters to claim the patent represents an official endorsement of the strategy and evidence that it would withstand IRS challenge.
3. Patents could be issued for blatantly illegal tax shelters, yet remain in place for years, producing revenue for the wrongdoers while the IRS battles the promoters in court.
4. Patents for tax shelters found to be illegal by a court would nevertheless remain in place, creating confusion among users and possibly producing illicit income for the patent holder. A related concern is that invalid patents will be issued by the USPTO and, although there are theoretical remedies, many will choose to license the patent rather than endure the cost of

222. Even the inventor’s own statements can trigger this risk. It is tempting to assume the inventor will be aware of this risk and file an application before making any potentially damaging statements, but such statements may be made in the course of debate over final bill language and therefore before it is known which strategy to apply for.

223. If the IRS (which at this point would have full knowledge of the strategy by virtue of its publication as a patent) decides that it is not an acceptable position, the test will be difficult to meet, absent a successful court challenge to the IRS position. *See supra* notes 86 and 87. Because the strategy is assumed to be intended to subvert the statutory intent, it is unlikely that the “substantial authority” requirement could be met.

224. 35 U.S.C. § 112 (“The specification shall . . . set forth [the] best mode contemplated by the inventor of carrying out his invention.”).

225. The assignee could be disguised by assigning the application to a shell entity, which could then grant non-exclusive licenses (which are not required to be recorded), but the inventor must appear on the application papers.

226. S. 681, 110th Cong. (2007) (as introduced by Sen. Levin).

challenging it. Dean Aprill reports that “[a]s a result of the difficulties in identifying prior art, tax practitioners are concerned that many of the patents that have been or will be issued for tax strategies will inevitably involve techniques that have long been accepted as routine. Many believe . . . that the SOGRAT™ falls into this category.”²²⁷

5. One single tax practitioner who is the first to discover a routine strategy which provides an advantage could “charge a toll” for all other taxpayers to use the same strategy, “even though as a matter of public policy all persons ought to be able to take advantage of the law to minimize their taxes.”²²⁸

The first concern appears to be based on the assumption that tax professionals are already working as hard as they can to find ways to minimize taxes for their clients. This argument ignores two vital roles that tax strategy patents fill: they result in making knowledge of the strategy available to the public,²²⁹ and they provide incentives to innovate, not just to tax planning professionals (who may, in fact, already have sufficient incentive) but to others as well. The response to each of the remaining concerns is that the current system provides solutions:

1. A patent on a tax strategy would no more imply approval by the IRS than a patent on a drug implied approval by the FDA or a patent on a toy would imply approval by the Consumer Product Safety Council. Moreover, the IRS can, through its regulation of tax preparers, prohibit any claim to the contrary.²³⁰

2. A patent on a blatantly illegal process would fail the utility requirement.²³¹ The Commissioner of Patents has authority to reexamine any issued patent, and could do so in such a case.²³² Should the Commissioner fail to act, any aggrieved party (presumably the IRS would qualify) could challenge the patent by declaratory judgment action.²³³ A finding of invalidity (or illegality) must be reported to the USPTO and is noted on the patent.²³⁴

3. The subargument that it is expensive to challenge tax strategy patents and therefore some will pay unnecessary license fees rather than litigate raises no special issues relating to tax strategy patents. It is possible that USPTO examination will fail to find critical prior art in any field,²³⁵ resulting in the

227. Aprill, *supra* note 37 (describing the SOGRAT tax strategy patent, which used stock options to fund a grantor retained annuity trust).

228. *Statement of Senator Carl Levin on Introducing the Stop Tax Haven Act, Part II*, Feb. 17, 2007, <http://levin.senate.gov/senate.gov/senate.cfm?id=269543> (last visited July 12, 2008).

229. Tax returns are confidential by law. Thus, the public cannot learn of the strategy by analyzing filed returns. Notwithstanding the assertion of Dean Aprill that historically tax practitioners have freely shared strategies, it appears that the current trend is to keep at least some strategies secret, even requiring clients to sign confidentiality agreements. Aprill, *supra* note 37, at 19; *see, e.g.*, Andrew Franklin Peterson, *Trade Secrets and Confidentiality: Attorney Ethics in the Silent World of Tax Planning*, 17 BYU J. PUB. L. 163 (2002).

230. Aprill, *supra* note 37, at 10.

231. *Id.* at 9.

232. *Id.* at 10.

233. *Id.*

234. *Id.*

235. *See* Matthew D. Henry & John L. Turner, *The Court of Appeals for the Federal Circuit's Impact on*

issue of an invalid patent. Thus, if the argument is valid, it leads to the conclusion that no patents should be granted, not that only tax strategy patents should not be granted.

4. The final concern is also provided for by the current system, but the solution is at odds to the one suggested as appropriate by the Senator. The purpose of the patent statute is to reward those who are the first to invent something others deem valuable.²³⁶ The person who discovers a valuable invention and discloses it to the public rather than keeping it secret should be allowed to “charge a toll” to others who wish to use it. It is not clear why a tax strategy (in the unlikely event that it met the statutory requirements) should be treated differently than other inventions. The inventor of the catalytic converter was allowed to charge such a toll, notwithstanding the public policy of reducing automotive pollution; drug companies are allowed to charge such a toll, notwithstanding the policy of improving health.²³⁷ Holding a patent, whether on a tax strategy a drug or a pollution control device, does not prevent others from using anything they would otherwise have the right to use—it requires them to pay a fee²³⁸ for using a tool that was not available to the public or likely to become available but for the act of the inventor.²³⁹

There are many things short of creating a special exemption for the tax industry that should reduce the level of concern. Good examination of tax strategy patents should result in most of them being rejected. A good examination is more likely to occur if the USPTO is adequately funded, if it has access to appropriate databases and cooperation from the IRS, if Congress produces a good legislative history and a clear statute.

The availability of tax strategy patents may in fact help prevent some of the evils the bill is designed to avoid. By posing the risk that a competitor may apply for a patent, any developer of a strategy will be discouraged from keeping the strategy confidential. Publication of the strategy serves the dual purpose of making it available to more taxpayers in the case of legitimate strategies, and notifying the IRS of the existence of the strategy so that it can take steps to deal with unlawful strategies.

Patent Litigation, 35 J. LEGAL STUD. 85, 90-91 (2006) (reporting that nearly half of patents litigated are found invalid).

236. Howard T. Markey, *Special Problems in Patent Cases*, 66 F.R.D. 529, 532 (1975).

237. Henry & Turner, *supra* note 235, at 85.

238. The patent statute provides that an appropriate fee is a “reasonable royalty.” 35 U.S.C. § 284 (2000) (“Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.”).

239. Though the patent statute allows injunctions against infringement, the grant of injunctions rests in the sound discretion of the trial court, and the Supreme Court has made clear that traditional balance of harm factors apply. *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 388 (2006).