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Business Method Patents and their Limits: Justifications, History, and the Emergence of a Claim Construction Jurisprudence

Nicholas A. Smith

University of Michigan Law School

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NOTE

BUSINESS METHOD PATENTS AND THEIR LIMITS: JUSTIFICATIONS, HISTORY, AND THE EMERGENCE OF A CLAIM CONSTRUCTION JURISPRUDENCE

*Nicholas A. Smith**

Cite as: Nicholas A. Smith, *Business Method Patents and Their Limits: Justifications, History, and the Emergence of a Claim Construction Jurisprudence*,
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* J.D., the University of Michigan Law School; B.A., the University of Iowa. The author would like to thank Professor Ronald Mann of the University of Michigan Law School for his guidance and support throughout the process of researching and writing this article; his encouragement made completion of this project possible.

Scholars, practitioners, and even popular media spilled much ink over business method patents in the late 1990s, eager to discuss the shift in jurisprudence that enabled patent holders to enforce business method patents for the first time. Since that initial period of excitement—during which businesses filed record numbers of applications for business method patents, and numerous articles tracing the doctrinal shift were published—commentators have written little on the topic.

Various patent holders, however, have since litigated business method patent claims. During these first few years after judicial endorsement of business method patents, such litigation has focused on the scope of broadly worded patents. Early court decisions did little to provide guidance, but several Federal Circuit decisions have suggested interpretive principles, and recent District Court applications of these appellate decisions indicate that a uniform approach to business method patent claim construction is taking shape. It is time to revisit business method patent jurisprudence.

This article draws together recent court rulings on business method patent claims to chart the early development of this body of law. Specifically, this article will discuss: (1) policies that support business method patents generally, and why businesses prefer patents over other forms of intellectual property when seeking to protect their economic interests in new business methods; (2) the history and ultimate demise of the business method exception to patentable subject matter; and (3) how recent court decisions affect current litigation to determine the scope of broadly worded business method patents.

I. POLICY CONSIDERATIONS BEHIND BUSINESS METHOD PATENTS

A. *Policy Objections to Business Method Patents*

Even though the Federal Circuit Court's decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* has answered the question of whether business methods are patentable subject matter under U.S. patent law with a resounding "yes," there remains an ongoing debate amongst legal scholars about the value and legitimacy of business method patents per se.¹ Two primary positions have been advanced against business method patents: (1) business method patents should be discontinued because they are inconsistent with the economic goals of patents generally, and (2) business method patents are not patentable

1. *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1375–1377 (Fed. Cir. 1998).

subject matter to begin with, and the *State Street* court erred when it rejected the business method exception.

The criticism that business method patents are inconsistent with the economic goals of patents focuses on the effects business method patents have on the overall marketplace. All patents, by virtue of their monopolistic nature, impose costs on the marketplace by preventing other market participants from using the protected invention for economic benefit. Given this, whether business method patents are justified is a classic cost-benefit inquiry: whether to grant patents for a certain type of invention depends on whether doing so will generate an overall benefit in the marketplace, regardless of how the granting or denial of any one patent will affect individuals in that instance.² Patents are a way of increasing market efficiency, not of simply rewarding individual creativity without any concern for the effect the award has on the aggregate.

Commentator Jared Grusd articulated this distinction in his discussion of the differences between invention and innovation in the context of patent law. The invention motivation theory of patent law focuses on the creation of new, patentable subject matter rather than on usefully implementing new technology in an economically beneficial way.³ Invention theory posits that “the patent lure is a necessary condition for achieving efficient levels of invention.”⁴

Because the focus of patent law is to encourage individuals to invent new technologies, it is difficult to justify business method patents outright, at least when employing an economic method of analysis. Even without patent protection, “other appropriability mechanisms (i.e. head start advantage, trade secrets, and promotional values) provide enough incentive” for individuals to develop new and more effective business methods, particularly in the area of Internet commerce.⁵

According to Grusd, the potential disadvantage of business method patents in an Internet commerce context stems from the heightened importance of being first in the online world. The benefits of being the first to invent a useful concept, or the first to identify and successfully tap into an undeveloped market, is called the “head start advantage.” This term “refers to the financial return an inventor of a business method enjoys exclusively as a result of being the first to invent. Generally, the inventor continues to enjoy an economic advantage over her competitors

2. Jared Earl Grusd, *Internet Business Methods: What Role Does and Should Patent Law Play?*, 4 VA. J.L. & TECH. 2, ¶¶ 41–43 (Fall 1999), at <http://www.vjolt.net/vol4/issue/v4i2a9-grusd.html>.

3. *Id.* ¶ 43.

4. *Id.*

5. *Id.* ¶ 44.

for the period of time it takes for the competitors to develop methods that enable them to compete in the marketplace.”⁶

A potential additional benefit to being the first to develop a new business method is that the head start advantage can be extended for as long as the firm with the advantage outmaneuvers its competitors through advertising. A firm with a head start advantage can establish for itself a brand name that can influence consumer decisions for years to come. As Grusd points out:

[T]his is true because trademarks can signify to the public the quality and value of the underlying invention or inventor to which they are attached. Thus, an effective trademark is likely to prolong a firm’s competitive advantage, even after its competitors have implemented the relevant business methods and other technologies.⁷

The power of trademarks to extend head start advantage periods seems to be particularly powerful in the context of Internet businesses. While evidence available at this time is merely anecdotal, Amazon.com, Yahoo!, and eBay all provide examples of companies that have been able to maintain market dominance because they have been able to extend their head start advantage.⁸

Shopping on the Internet is not like going to the mall or flipping through the yellow pages. If consumers remember your business name and what you sell, they likely will go directly to your Web site without ever encountering your competitor’s efforts to lure their business. Admittedly, phonebook-like lists are available on the Internet, but they often are hundreds of entries long, and all but the most motivated consumer will go with the vendor she already knows. A company with a dominant market share and customers who never see the competition is virtually guaranteed to remain dominant for an extended period; Grusd’s argument follows that there is little need for business method patent protection in such a marketplace.

Grusd’s second argument against business method patents generally focuses on the characteristics of Internet marketplace participants. The vast majority of Internet businesses are small operations that lack the financial capacity to obtain patents and to protect them through patent prosecution, which generates extraordinarily high litigation costs. For those companies that cannot afford to maintain the integrity of their

6. *Id.* ¶ 45.

7. *Id.* ¶ 46.

8. *Id.* ¶ 47.

business method patents, trade secrets might be a better choice to protect inventions.⁹

Grud further argues that “a patent regime would impose significant costs on Internet commerce that would not be incurred under a non-patent regime.”¹⁰ Patent protection in this context unduly inhibits market efficiency because it prevents the useful application of business method ideas protected simply because they are new and unique, not because they provide a cognizable market benefit.¹¹

Existing conditions provide more than adequate incentive to invent without interfering with the operation of the market, while business method patents protecting invention provide little or no additional incentive while effectively prohibiting useful applications of good ideas.¹² Thus, business method patents cannot be justified based on the invention motivation theory—they reward the creator for being creative, not for creating a quantifiable economic benefit in the marketplace.

Grud also addresses the innovation theory of patent protection.¹³ Innovation theory differs from invention theory in that invention theory focuses on the actual creation of the new technology, while innovation theory focuses on the process of bringing that new technology to market.¹⁴ In other words, innovation theory requires an inventor to develop a commercially practical application of her new idea before seeking intellectual property protection. The obvious and, in the view of this author, fatal flaw in innovation theory is that patent examination and issuance under the innovation theory would require the United States Patent and Trademark Office (USPTO) to decide for itself the commercial practicality of every patent application that comes before it.

The prospect of a patent system operating under the innovation theory is troubling. Such a system would be nearly impossible to administer, and it would require the USPTO to adopt an objectionable paternalistic policy involving government determination of what private parties would or should find valuable. Nonetheless, innovation theory remains a topic of discussion amongst those writing on business method patents, and so must be addressed.

With practical applications of new ideas as the focus of patent law, business method patents can be justified in two ways: (1) business method patents encourage advertising and licensing within the

9. *Id.* ¶¶ 49–51.

10. *Id.* ¶ 52.

11. *Id.*

12. *Id.* ¶ 54.

13. *Id.* ¶ 55.

14. *Id.* ¶ 42.

marketplace, and (2) business method patents encourage the development of new businesses.

Licensing enables the inventor of a business method who does not have the resources to capture the full economic benefit of the method to receive economic compensation for her invention, so long as she holds a patent on the business method.¹⁵ Licensing enables even relatively small players in a given industry to have adequate incentive to create useful new business methods and to put them to beneficial use in the marketplace.

Such licensing arrangements also can have significant benefits between industries. A business method patent holder with the ability to utilize the process for profit on its own can derive additional economic benefit from the patent by entering licensing arrangements with firms in other lines of business. Such inter-industry licensing arrangements allow multiple businesses in various industries to utilize patented processes, alleviating some of the concerns about the patent monopoly by providing economic incentives for a given patented invention to be used in various sectors within the marketplace.¹⁶

Despite this potential for benefit, Grusd concludes that business method patents ultimately would impose more costs than they would create benefits.¹⁷

[T]here is good reason to believe that the costs associated with competition blocking will be particularly amplified with regard to the Internet. This is so because patents on Internet business methods may signal the end of barrier-free entry to commerce that has been the hallmark of the Internet. Not only can the existence of patents on Internet business methods impede new entrants from entering the marketplace, but it can ultimately bar existing parties from the market. This leads to reduced competition and ultimately market inefficiency.¹⁸

Furthermore, due to the heavy dependence upon recent technology in high-tech and Internet industries, allowing business method patents will stifle competition by reducing the number of start-up firms that can compete with established firms.¹⁹ Without access to the multitude of patented technologies needed to be competitive in the high-tech market, a small firm with but a few patents to its name will struggle to survive

15. *Id.* ¶¶ 55–57.

16. *Id.* ¶ 57.

17. *Id.* ¶¶ 60–67.

18. *Id.* ¶ 60.

19. *Id.* ¶ 62.

around behemoth corporations that hold hundreds, or even thousands, of patents.

Grusd's rationale appears in the work of several other commentators, including that of Professor Dreyfuss, who discusses at greater length the costs and benefits that business method patent protection creates. Dreyfuss asserts that intellectual property rights are generally treated as solutions designed to prevent free-riding while encouraging disclosure, then argues that business method patents fail to provide a real benefit because they do not accomplish either of these goals.²⁰ Business method patents do not provide a solution to the free-rider problem because "business methods are . . . hard to free ride on."²¹ Because they are largely designed around interpersonal interaction, business methods "depend in strong ways on the social structure within the firms utilizing them—on compensation schemes, lines of reporting, supervising policies, and other business factors."²²

Furthermore, argues Dreyfuss, there is little or no need to provide extra incentive for businesses to disclose their business methods.²³ Businesses capitalize on innovative business methods only when using them, which requires public disclosure of the method because "[b]usinesses are largely practiced in public."²⁴ And firms have every incentive to practice their creative business methods in public without concern for maintaining secrecy because "sticky business methods are their own reward. With lock in, network effects, and even good old fashioned loyalty, lead time (the first mover advantage) goes a long way to assuring returns adequate to recoup costs and earn substantial profit."²⁵

Dreyfuss also asserts that business method patents are ill advised because "the economic costs they impose can be astounding."²⁶ The costs imposed by patent protection related to the production of a good or service in the marketplace is not confined to the higher prices to the consumer that the patent-provided monopoly allows.

In order to assess properly the total cost that business method patents impose, one must also consider the fact that patent protection provided now increases the cost of future innovations. Due to the cumulative nature of knowledge, the increased cost of using existing intellectual products to create new ones will result in higher prices, which will be

20. Rochelle Cooper Dreyfuss, *Are Business Method Patents Bad for Business?*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 263, 274–75 (2000).

21. *Id.* at 275.

22. *Id.*

23. *Id.*

24. *Id.*

25. *Id.*

26. *Id.* at 274.

topped off again by using the market monopoly power that patent protection provides. This interference with the development of future innovations is further compounded by the fact a private party with monopolistic control over the ability to use protected technology for any purpose, especially a party unwilling to enter licensing agreements, likely will prevent others from applying and building upon the innovation in ways that the patent holder never considered. Echoing Grusd, Dreyfuss concludes that business method patents result in less innovation, higher prices, and an inefficient marketplace.²⁷

This worry about an inefficient marketplace stems, in part, from the attitude that providing monopoly power regarding how one conducts business is antithetical to the traditional conception of an open, unfettered marketplace driven by competition. This concern about undue interference has been coupled with the assertion that an efficient market will reward business method innovation sufficiently to encourage continual efforts to develop and to improve upon business methods.²⁸

In essence, this objection to business method patents calls for recognition that science is different from business, and that innovation in science and innovation in business depend upon different incentive structures. Patent protection promotes invention in science because the time and resources required for scientific invention are difficult to recover in the open marketplace without limiting the ability of competitors to appropriate and market the new invention. Business innovations, however, provide a competitive advantage in the market, and thus by their very nature create economic incentives adequate to encourage creativity and development in business.²⁹

This incentive analysis resonates with common sense objections to business method patents, many of which assert that "preventing use of basic commercial mechanisms erodes the concept of a free market economy, which constitutes the essence of American society."³⁰ Within the context of the open United States marketplace, there is something odd about guarding against marketplace competition. After all, the long history of U.S. business is one of innovation, emulation, and innovation again. It also is a history of remarkable creativity and success, all without business method patents until the past few years. Indeed,

27. *Id.* at 275-76.

28. See Francisc Marius Keeley-Domokos, *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 14 BERKELEY TECH. L.J. 153, 167-68 (1999).

29. See Claus D. Melarti, *State Street Bank & Trust Co. v. Signature Financial Group, Inc.: Ought the Mathematical Algorithm and Business Method Exceptions Return to Business as Usual?*, 6 J. INTEL. PROP. L. 359, 391-92 (1999).

30. Keeley-Domokos, *supra* note 28, at 168-69.

[N]owhere in the substantial literature on innovation is there a statement that the United States economy suffers from a lack of innovation in methods of doing business. Compared with the business practices of comparable economies we seem to be innovators in distribution and in the service industries. By the casual empiricism of counting the number of graduate business schools, the United States is ahead of other developed economies. This datum, plus the substantial enrollment of foreign students in the graduate schools of business in the United States, permits the inference that business methods in this country as presently practiced, are considered innovative and attractive, despite the prior absence of patent protection.³¹

Business as it has been practiced in the United States—that is, traditional marketplace copycat practices in an open and intensely competitive environment—has enjoyed unparalleled success. Why, then, should we offer patent protection for business methods at all?

B. Policy Support for Business Method Patents

Despite the objections of several commentators to business method patents, such patents have gained widespread support both from industry leaders and from many scholars. Businesspersons in the high-tech sector generally have been highly supportive of some sort of patent protection for business methods, especially those business methods that relate to software used for e-commerce purposes. Perhaps the most common—and certainly the most aggressively asserted—justification for business method patents is that these patents foster creativity and innovation in the marketplace, particularly in the area of e-commerce.³²

Commentators Peter Brown and Lauren McCollester argue that “the long-recognized purpose of the copyright and patent laws, fostering creativity and invention, is *essential* to the continued intellectual and economic expansion in the information age.”³³ A lack of potent, reliable intellectual property protection innovation in the rather ethereal realm of

31. Leo J. Raskind, *The State Street Bank Decision: The Bad Business of Unlimited Patent Protection for Methods of Doing Business.*, 10 *FORDHAM INTELL. PROP. MEDIA & ENT. L.J.* 61, 92 (1999).

32. See Sari Gabay, *The Patentability of Electronic Commerce Business Systems in the Aftermath of State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 8 *J.L. & POL'Y* 179, 217–20 (1999) (noting that industry leaders see business method patents as the very bedrock of the e-commerce industry).

33. Peter Brown & Lauren McCollester, *Should We Kill the Dinosaurs or Will They Die of Natural Causes?*, 9 *CORNELL J. L. & PUB. POL'Y* 223, 227 (1999) (*emphasis added*).

software and e-commerce will discourage the development of new business methods.³⁴

Providing rewards for innovation is paramount for Brown and McCollester, who are willing to sacrifice even the marketplace benefits of antitrust laws in favor of unqualified intellectual property rights.³⁵ Brown and McCollester argue that antitrust laws should not be used to diminish intellectual property rights when a particularly innovative producer dominates a legal market through the exercise of various legal monopolies provided by patent protection.³⁶ While Brown and McCollester do not articulate their position on antitrust laws generally, their analysis of intellectual property rights in the context of the high-tech industry—whether software or the business method the software articulates—rests on the assumption that players in the high-tech marketplace are so fast-moving and proficient that there is no need for antitrust laws, or at least that only low-level enforcement of antitrust laws against high-tech companies is necessary to maintain an open and competitive marketplace.³⁷ The market, according to Brown and McCollester, will take care of itself: “while copyright or patent law protects the rights of the author or inventor in a general sense, only the actions of millions of consumers acting in unison create technology standards which give a single company or a small group of companies market dominance.”³⁸

No other commentators have gone as far as Brown and McCollester in prioritizing intellectual property law over antitrust law; such restraint by other commentators is, in the view of this author, well founded. In their effort to elevate the status and priority of intellectual property law, Brown and McCollester first argue that patent law creates monopolies companies should not be punished for exploiting, while later they argue only consumer behavior and consumer choice—presumably in a marketplace with various viable options, namely, not a monopoly—create the monopolies companies should not be punished for exploiting.³⁹ Neither argument concerns the rationale of marketplace efficiency, which provides the impetus for both setting incentives through patent law and enhancing competition through antitrust law; presumably this underlying rationale of marketplace efficiency is just as strong and worthy of pursuit via antitrust law as it is via patent law. Brown and McCollester articulate no reason for pursuing one body of law justified by marketplace efficiency at the expense of the other like-motivated body of law. This

34. *Id.* at 228–29.

35. *Id.* at 230.

36. *Id.*

37. *Id.* at 231.

38. *Id.* at 230.

39. *Id.*

balancing is of no concern, of course; if patent law is justified by an individual-centered reward rationale, but if that is the case, then Brown and McCollester should advocate the elimination of antitrust laws entirely. In the end, Brown and McCollester's reasoning supports the proposition that patent law should be fully enforced no matter how inefficient the marketplace becomes as a result.⁴⁰ This is a difficult position to maintain when one considers that the marketplace's governing body (which is responsible for the well-being of all its constituents) issues a patent to grant a temporary monopoly in order to benefit the marketplace it is responsible for regulating.

The issue of whether to enforce antitrust laws at all aside, Brown and McCollester defend their position on intellectual property and antitrust law by asserting that we need not worry about enforcing antitrust laws in the high-tech sector because no monopoly lasts forever.⁴¹ Rapid and incessant evolution driven by consumer demand characterize Internet business, and any entity dominant now because of a patent-generated monopoly is likely to be displaced as technology advances or consumer preferences change.⁴² Brown and McCollester assert without qualification that "in the technology industry, today's dominant technology may be quickly replaced by tomorrow's improvements without any manipulations by non-market forces, thus eliminating the need for expansive application of anti-trust laws. In the technology sector, natural causes will kill the dinosaurs."⁴³ One wonders if Brown and McCollester would toe such a hard line now that the U.S. Department of Justice has exposed the business practices and the resulting market dominance of Microsoft, which was able to use market power to debilitate any high-tech innovation that threatened it.

Brown and McCollester's apology may be insufficient, but the case for business method patents is not dead. The position that antitrust laws should be sacrificed in order to create a beefed-up intellectual property regime is difficult to maintain, but it also is difficult to refute the notion that patent law encouraged the creation and the marketing of many Internet-related innovations, business methods in particular. The number of applications for business method patents has exploded in recent years, with an extraordinary variety of methods and business models obtaining patent protection, ranging from advertising strategies to software integration models to ordering systems.⁴⁴

40. *Id.* at 236–237.

41. *Id.* at 231.

42. *Id.* at 231.

43. *Id.* at 234.

44. Gabay, *supra* note 32, at 216–19.

There was an extraordinary period of creativity in the realm of Internet businesses and business methods during the mid and late 1990s, but it is unclear whether business method patents were primarily responsible for this period of creativity. While the economic protections provided by business method patents likely had a strong effect on the high-tech industry, the fact that the expansion into e-commerce on the Internet—previously a completely untapped and potentially huge market—occurred during one of the strongest economic periods in recent American history (subsequent corporate and accounting scandals notwithstanding) also likely played a major role. The true value of business method patents in encouraging creativity and innovation in e-commerce in a more fully developed market through various business cycles may not be known for many years, but our early experiences indicate that patent law plays a valuable role in getting business methods to market in the first place.

Business method patents provide e-commerce Internet startup companies the period of protection they need to develop their product and market position before being overwhelmed by larger, well-established competitors.⁴⁵ Even in the wake of the dot-com market crash, this assertion carries weight. Amazon.com, one of the few purely e-commerce companies to survive the dot-com crash intact, provides the most famous example. In December 1999, Amazon.com—by no means an overmatched startup at this point in its history, but still undoubtedly on shaky ground—succeeded in its efforts to enforce the patent on its “One-Click” ordering system, forcing its much more established bricks-and-mortar competitor, Barnes & Noble, to remove from its Web page a similar ordering option.⁴⁶ Following this decision, Amazon.com entered the holiday shopping season armed with what was arguably a distinct advantage in ordering systems and free nationwide press coverage. Although its “One-Click” patent was later all but invalidated in a Federal Circuit Court decision, Amazon.com’s use of its patent to build its business remains illustrative.⁴⁷ Given the chance to protect and develop the market niche it had created for itself, Amazon.com survives today as one of the best hopes for a profitable e-commerce enterprise. As the Internet e-commerce sector ages, and the companies within it become more experienced, participants in the e-commerce marketplace will look to Amazon.com’s success as a model—Amazon.com did, after all, survive

45. *Id.* at 222.

46. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 73 F. Supp. 2d 1228 (W.D. Wash. 1999).

47. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1359–65 (Fed. Cir. 2001).

the dot-com crash and continues to draw in significant funding even though it exists in an industry filled with failed enterprises.

Even though business method patents provide the same benefits and meet the same standards for innovation and utility that other patents satisfy, there are those who still would prohibit business method patents because they protect business methods, which these critics assert are different from chemistry or electronics and should be left open to all market participants at all times.⁴⁸ Briefly stated, this objection to business method patents generally “notes that patentability of methods of doing business amounts to a protection of the fundamental tools for economic competition and progress. Specifically, preventing use of basic commercial mechanisms erodes the concept of a free market economy, which constitutes the essence of American society.”⁴⁹ The political alarm sounded by this objection perhaps is an overreaction, but the concern underlying the author’s distress is legitimate: business method patents are different from other patents because business method patents go beyond limiting the goods or services that a competitor can use or sell in an otherwise open marketplace to include limiting a competitor’s ability to participate in the marketplace in the first place.

This objection ultimately fails as well because it, too, rests on the assumption that business method patents will not—cannot—inform and inspire creative new approaches in other businesspersons. Allowing marketplace participants to protect their business method innovations for a limited period of time requires competitors to innovate themselves to profit from that same market.⁵⁰ Supporting business method patents encourages marketplace participants to be effective, efficient, and creative competitors.⁵¹ Prohibiting any and all business method patents protects weak marketplace competitors and discourages innovation, both because innovative competitors know they cannot protect their efforts, and because weaker competitors know they can free ride without penalty.⁵²

The market participation objection also fails on the ground that it does not recognize that business method innovations represent progress, just as a new chemical compound or a new manufacturing process represents progress. The very purpose of patent law is to encourage progress, and as manifestations of progress, business methods should be protected just as any other technological innovation is protected.⁵³ This is

48. See generally Dreyfuss, *supra* note 20; Grusd, *supra* note 2; Melarti, *supra* note 29.

49. Keeley-Domokos, *supra* note 28, at 168–169.

50. See *id.* at 169.

51. See *id.*

52. See *id.*

53. *Id.*

particularly true in the area of e-commerce, where it might be difficult to separate a business method from the software that implements it.

To object to business methods generally, then, is to assert that innovations in business methods are not progress. Such an assertion overlooks the fact that business method patents and the innovations they protect accomplish the same goals associated with more generally accepted patents: business method patents encourage individual innovation; business method patents encourage a stronger, more competitive marketplace by requiring competitors to innovate themselves before capturing the benefits of a new technology or market; and business method patents that prove valuable in the long term do so because they manifest a true improvement in current industry practice.⁵⁴

The only remaining reason to set aside business method patents as somehow different and undesirable requires one to embrace the untenable (and rather insulting) proposition that businesspersons are incapable of drawing from the innovations of others when innovating for themselves, even though chemists, biologists, and engineers are fully capable of doing so. There simply is no good reason for an opponent of business method patents to assert that a chemist will be inspired by another chemist's innovation while asserting that a businessperson could not draw the same sort of creative inspiration and insight from another businessperson's innovation.

C. The Appeal of Business Method Patents over Other Forms of Intellectual Property Protection in the Digital Realm

Patent protection provides powerful protection of intellectual innovation by giving the patent holder exclusive rights for 20 years to the use of that technology in exchange for public disclosure of the patented technology.⁵⁵ Patent protection is desirable because it is absolute, and it remains so in the most public of settings—an important quality when seeking to protect business methods used in the open to conduct commercial transactions. Patent rights held by a competitor provide strong disincentive for others to infringe upon the patent holder's intellectual property right, even though the claimed invention became a matter of public record during the patent application process.⁵⁶ The threat of patent prosecution by a patent owner with an economic interest in vigilantly defending its rights—rather than the threat of prosecution by a govern-

54. *Id.*

55. See 35 U.S.C. §§ 154, 271(a); see also William D. Wiese, *Death of a Myth: The Patenting of Internet Business Models After State Street Bank*, 4 MARQ. INTEL. PROP. L. REV. 17, 22–23 (2000).

56. See Gabay, *supra* note 32, at 197–98.

ment agent overwhelmed with patent violation claims—ensures that patent rights will be protected to the fullest, as a private patent holder who stands to lose great sums of money through neglect will have greater motivation to defend patent rights than a removed government agency with nothing to lose.

Patent protection does have its drawbacks, the most prominent of which is that only certain types of inventions are eligible for patent protection.⁵⁷ The enabling patent legislation states, “Whoever invents or discovers any new or useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.”⁵⁸ The Supreme Court has interpreted this language as requiring that a claimed invention fit into one of the four articulated categories.⁵⁹ Thus, while patent protection is desirable, it might not be available for every invention one seeks to protect. There still are other intellectual property protections available; a potential protection-seeker must evaluate in a cost-benefit analysis to determine which will best serve the protection-seeker’s long-term economic interests.

Copyright provides an alternative, but it is a largely ineffective substitute for patent protection because the “goal of copyright law is to protect nonfunctional, expressive works, while patent law seeks to protect only functional technology.”⁶⁰ Indeed, copyright “is designed to protect not the functional characteristics of inventions, but merely ‘the literal expression[s]’ ” of the copyrighted material.⁶¹ One commentator deftly illustrated how copyright protection lacks the expansiveness and bite of patent protection:

[I]f an inventor created a novel business method and subsequently described the work in a pamphlet, he would have the exclusive right under copyright law to distribute the pamphlet, but could not prevent others from using the method described in the pamphlet. Similarly, if he developed a computer program for a business system, copyright law would prevent others from copying the expression contained in the program, but would not prevent them from practicing the invented method

57. *Id.* at 193.

58. 35 U.S.C. § 101 (1994).

59. *Kewanee Oil v. Bicron Corp.*, 416 U.S. 470, 483 (1974) (“no 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.”).

60. Chad King, Note, *Abort, Retry, Fail: Protection for Software-Related Inventions in the Wake of State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 85 CORNELL L. REV. 1118, 1163 (2000).

61. *Id.* at 1161.

or from independently developing a computer program that could perform the same method of doing business. A patent, by contrast, would protect the underlying method in each case.⁶²

This aspect of copyright is a major shortcoming as a patent substitute because the aspect of a patented invention that makes it commercially valuable is the underlying, functional principles of the invention.⁶³

A second alternative to patent protection is trademark, though its usefulness in replicating patent protections is severely limited. The only aspect of patent protection for which trademark could prove an adequate substitute is the aesthetic aspect of software interfaces; the inability of trademark protection to protect the functional aspects of technology—rather than just the “look and feel” of a presentation of that technology—is obvious.⁶⁴ Trademark could be a useful patent complement, but it is almost completely inadequate as a stand-alone substitute for patent protection.⁶⁵ This is particularly the case with business methods, for which a visual representation of the method is irrelevant to the application and usefulness of the business method in practice.⁶⁶

A third possibility that might be an effective alternative to patent protection in some circumstances is trade secret protection, which focuses on the conduct of the protection-seeker rather than on the subject matter being protected. “A trade secret is ‘an internal business practice that is kept private’ and may consist of ‘any formula, pattern, device or compilation of information which is used in one’s business, and [provides] . . . an advantage over competitors who do not know or use it.’”⁶⁷

Trade secret protection certainly has appealing features. In particular, the process for establishing trade secret protection is noninvasive as to research of the person or entity seeking intellectual property protection. “[D]evelopers need not, and in fact must not, disclose the protected information to secure protection.” The ability to maintain secrecy while still obtaining protection can benefit entities with ongoing research and development projects that build upon one another, as well as those entities that value secrecy in their operations generally: “Not only do they [technology developers] get protection . . . but in so doing they also need not even disclose how they produced it. In contrast, to obtain patent pro-

62. Wiese, *supra* note 55, at 23.

63. *See id.*

64. King, *supra* note 60, at 1160–61.

65. *Id.*

66. *Id.*

67. Wiese, *supra* note 55, at 23 (quoting Michael L. Fuelling, *Manufacturing, Selling, and Accounting: Patenting Business Methods*, 76 J. PAT. & TRADEMARK OFF. SOC’Y 471, 473 (1994); *Kewanee Oil*, 416 U.S. at 474 (quoting Restatement of Torts § 757 cmt. b (1939)).

tection, developers must disclose their inventions, potentially allowing others the opportunity to improve upon them.”⁶⁸

It appears that as long as an entity can keep its secrets, trade secret protection is an effective alternative to patent protection. But while trade secrets might be the best way to protect fried chicken recipes and carbonated soda formulas, they are of questionable usefulness in the business method context. Put simply, “some business models lend themselves better to protection as trade secrets than others.”⁶⁹ Those business methods best suited for protection as trade secrets are those that are completely internal to a business, or those that can be strictly controlled through contracts with close business associates.⁷⁰ Trade secrets, then, are useful only for markedly private activities. Any business method for engaging those outside the business entity is left unprotected.

In particular, trade secrets are of no use in protecting methods of business designed to facilitate selling to a customer—“selling methods are anathema to trade secret protection.”⁷¹ The difficulty in attempting to use trade secret law to protect selling methods is that “[b]y their very nature, selling methods involve parties outside the business who are exposed to the methods.”⁷² In selling contexts, trade secret protection is not just impractical, but impossible.⁷³ By definition, trade secret protection becomes unavailable the moment one employs a concealed selling method because its use makes the method “readily ascertainable by proper means” to “other persons who can obtain economic value from its disclosure or use.”⁷⁴ If one wishes to use a business method to engage customers, one cannot rely on trade secret law to protect one’s interest in that method unless one never actually uses the protected method.⁷⁵

68. King, *supra* note 60, at 1159.

69. Wiese, *supra* note 55, at 25.

70. *Id.*

71. *Id.*

72. *Id.*

73. *Id.*

74. Uniform Trade Secrets Act § 1(4) (amended 1985); 14 U.L.A. 438 (1990).

75. The ineffectiveness of trade secret protection in realms where businesses engage the public in some way might be beneficial to society, thus eliminating the need for concern for a frustrated business entity seeking trade secret protection. Commentator Chad King has argued in the context of software development that,

[T]he mandate of secrecy actually works against the developers and even society as a whole. Rather than promoting information exchange and technological innovation, trade secrecy encourages developers to hoard their inventions; this forces software developers to “spend much of their efforts reinventing the wheel because there is not an adequate collection of how problems have been solved in the past.”

King, *supra* note 60, at 1159–60 (quoting Lee A. Hollaar, *Justice Douglas Was Right: The Need for Congressional Action on Software Patents*, 24 AIPLA Q.J. 283, 286 (1996)). According to King, the development of the software industry has been hampered by the widespread

Copyright, trademark, and trade secret each are flawed options for protecting business methods. Patent rights, with their guarantee of protection in the public sphere, are the only viable option to protect business methods that are neither purely internal to the business nor subject to tight control by the business.⁷⁶ Given this, the recent flood of business method patents applications should come as no surprise.⁷⁷ The very aspect of business methods that make them valuable is their functionality in the market, and patent law is the only intellectual property measure that explicitly and effectively safeguards the functionality of claimed method inventions allowed in the open for others to see.⁷⁸

II. THE RISE AND FALL OF THE BUSINESS METHOD EXCEPTION TO PATENTABLE SUBJECT MATTER

A. *The Rise of an Exception Judicially and Administratively Created*⁷⁹

For many years, the United States Patent and Trademark Office (“USPTO”) and courts denied patent protection for business methods. This position reflected the longstanding view that business methods were properly conceptualized as products of nature and not as the products of human creativity, thus making business method patents unworthy of patent protection.⁸⁰ Hostility towards business method patents is most visible in nineteenth-century USPTO and lower court decisions, where one finds the strongest language asserting the inherent unpatentability of business methods.⁸¹ In the 1868 USPTO hearing *Ex parte Abraham*, the

practice of trade secrecy among software developers, and an even greater development would have been achieved had developers shared their inventions with one another, both to stimulate each other and to prevent repetition. *Id.* at 1160. King argues that because the purpose of having any intellectual property regime at all is to encourage technological innovation, public disclosure amongst competitors is favored and should be encouraged whenever possible,

[E]ven though individual software developers might have greatly benefited from the protection of trade secrecy, the basic policy goals behind intellectual property protection demand a form of protection that encourages more information exchange and synergy between competing developers. Although other intellectual property protection schemes may allow disclosure and the resultant sharing of information, only one existing scheme requires them: patent law. *Id.*

76. See Wiese, *supra* note 55, at 26–29.

77. *Id.*

78. See King, *supra* note 60, at 1158–64; see also Wiese, *supra* note 55, at 19–25.

79. Commentators Alan L. Durham and Jared Earl Grusd each have authored concise histories of the business method exception. Much of the history set forth in this section is adapted from these articles. See Alan L. Durham, “Useful Arts” in the Information Age, 4 *BYU L. REV.* 1419, 1419–1528 (1999); see also Grusd, *supra* note 2.

80. See Grusd, *supra* note 2, at ¶¶ 11–12.

81. *Id.* ¶ 14.

Patent Commissioner asserted that “it is contrary to the spirit of the law . . . to grant patents for methods of book-keeping.”⁸² The District Court for the Southern District of New York later took an even stronger position in *United States Credit Sys. Co. v. American Credit Indemnity Co.*, stating that a “method of transacting common business” is unpatentable.⁸³

Federal appellate courts did not address the business method patent issue until 1908, when, in *Hotel Security Checking Co. v. Lorraine Co.*, the Second Circuit indicated in dicta that a method and means for cash-registering and account-checking was unpatentable.⁸⁴ The invention in *Hotel Security* provided a system to distinguish between each waiter’s order slips and, in turn, to prevent fraud by employees.⁸⁵ The *Hotel Security* court held the invention unpatentable because it lacked novelty; that is, although this invention might be practical in conducting business, it was not patentable because it was “as old as the art of bookkeeping, i.e., charging the goods of the employer to the agent who takes them.”⁸⁶ The *Hotel Security* court further held that the claimed method was but an abstract idea because the court was unable to locate any physical means of implementing the system that were new and useful.⁸⁷ After this holding, the court went on to intimate in dicta that a sufficiently novel bookkeeping process still would not be worthy of patent protection.⁸⁸

Hotel Security is generally regarded as the origin of the business method exception, influencing the course of patent law for the next ninety years.⁸⁹ Following *Hotel Security*, the USPTO adopted a broad interpretation of the business method exception, expanding it well beyond the letter, if not the spirit, of the *Hotel Security* holding.⁹⁰ “Though the case was not decided on subject matter grounds, the USPTO began to bar all claims directed at business methods without deciding the merits of the individual claims.”⁹¹ The USPTO soon incorporated this policy into its Manual of Patent Examining Procedures (“MPEP”).⁹² MPEP § 706.03(a) codified the USPTO position that “though seemingly within the category of process or method, a method of doing business can be

82. 1868 Com’R Dec. 59, 59 (Com’R Pat. 1868).

83. *U.S. Credit Sys. Co. v. Am. Credit Indem. Co.*, 53 F. 818, 819 (C.C.S.D.N.Y. 1893).

84. *Hotel Sec. Checking Co. v. Lorraine Co.*, 160 F. 467, 469 (2d Cir. 1908).

85. *Id.* at 467.

86. *Id.* at 469.

87. *Id.* at 470.

88. *Id.* at 469–70.

89. See Gabay, *supra* note 32, at 200–01.

90. See Grusd, *supra* note 2, ¶¶ 15–17.

91. *Id.* ¶ 16.

92. See Gabay, *supra* note 32, at 201.

rejected as not being within the statutory classes.”⁹³ This MPEP provision was not binding on patent examiners, but it provided grounds to summarily reject a business method patent application by “finding that the method was not within the scope of the four statutory categories.”⁹⁴ Consequently, few business method patent applications were filed between the *Hotel Security* decision and 1996, when the provision discrediting business method patents was removed from the MPEP to reflect a shift in attitude towards software patents and their associated processes.⁹⁵

Courts also did their part to entrench the business method exception by consistently deferring to the exception announced in *Hotel Security* and subsequent USPTO policy. Commentator Rinaldo Del Gallo, III, stated it most succinctly:

Courts would declare that there must be a physical nexus by the employment of an inventive physical means. These cases [reciting the business method exception] would then be fallaciously recited for the principle that . . . business systems or methods are *per se* improper subject matter for patents. A phantasmic body of law had been created.⁹⁶

Perhaps the most intriguing of Del Gallo’s conclusions on the judicial enforcement of the business method exception is that “no court majority has ever held that a step-by-step method that incorporated a novel and nonobvious physical means to accomplish that method was *per se* unpatentable simply because the method was directed to a way to conduct business rather than a way to make or manufacture.”⁹⁷ Though not explicitly, courts consistently presumed the validity of the business method exception, but none have ever formally enforced it when every requirement other than subject matter was met.⁹⁸

While no court formally recognized the business method exception as it came to be enforced, this is not to say that courts did not wrestle with business method patents from time to time. Several cases decided shortly after *Hotel Security* upheld patents that one might ordinarily consider to be business method patents by locating questionable “integral” physical components of the patented invention that, in turn, lifted the

93. Manual of Patent Examining Procedure § 706.03(a) (1983).

94. Gabay, *supra* note 32, at 201; The four statutory categories are: process, machine, manufacture, and composition of matter. 35 U.S.C. 101 (1994).

95. Grusd, *supra* note 2, ¶ 16.

96. Rinaldo Del Gallo, III, *Are “Methods of Doing Business” Finally out of Business as a Statutory Rejection?* 38 IDEA 403, 408 (1998) (*alteration in original*).

97. *Id.* at 403–04.

98. Grusd, *supra* note 2, ¶ 17.

claimed invention out of the business method exception's reach.⁹⁹ In the Sixth Circuit case *Cincinnati Traction Co. v. Pope*, the claimed invention was a perforated railway ticket that could be torn to indicate that the ticket was issued in the morning, thus preventing a passenger from reusing her morning tickets to transfer trains without paying during her afternoon return trip.¹⁰⁰ Although the party resisting patent prosecution argued that the patent claim was for nothing more than an abstract business method—and thus was unpatentable subject matter—the court upheld the patent.¹⁰¹ The court noted that this was a close case, but the physical structure of the ticket justified considering it a patentable manufacture.¹⁰²

The Seventh Circuit addressed a similar problem in *Rand, McNally & Co. v. Exchange Scrip-Book Co.*, where the claimed invention involved transportation tickets issued in increments of money rather than miles, which enabled a ticket holder to use the tickets for different modes of transportation in affiliated transportation systems.¹⁰³ The tickets consisted of a ribbon or perforated paper folded into a passenger's ticket book, which was crucial to the court's decision to reject the argument that the patent claim was for nothing more than an abstract business method.¹⁰⁴ The court held that the patented ticket was not a method at all, but a physical tangible facility, without which the method would have been impracticable, and with which it was practicable.¹⁰⁵ The court padded its reasoning by noting that the nature of the invention in *Rand, McNally* was the same for thousands of like facilities that, once designed and put into use, had become the first of a new business method and had withstood patentability challenges.¹⁰⁶ Indeed, courts reached similar conclusions in other cases involving tickets or similar printed materials.¹⁰⁷

Although these ticket cases might indicate openness to the idea of business method patents, courts remained hostile towards business method patents that could not be plausibly tied to an enabling physical

99. Durham, *supra* note 79, at 1488.

100. *Cincinnati Traction Co. v. Pope*, 210 F. 443, 444–46 (6th Cir. 1913).

101. *Id.* at 444–47.

102. *Id.* at 446.

103. *Rand, McNally & Co. v. Exchange Scrip-Book Co.*, 187 F. 984, 984–85 (7th Cir. 1911).

104. *Id.* at 986.

105. *Id.*

106. *Id.*

107. Durham, *supra* note 79, at 1489, n. 390 (citing *Thompson v. Citizens' Nat'l Bank*, 53 F. 250, 255 (8th Cir. 1892) (holding bank books with perforated and foldable pages to constitute patentable subject matter); *Benjamin Menu Card Co. v. Rand, McNally & Co.*, 210 F. 285, 286 (N.D. Ill. 1984) (holding a perforated combination of menu card and meal check to be patentable subject matter; "the fact that the structure may be of cardboard with printed matter upon it does not exclude the device from patentability.")).

form.¹⁰⁸ In *In re Moeser*, the Court of Appeals for the District of Columbia upheld an USPTO decision to reject claims for an insurance plan that equates to modern day funeral planning.¹⁰⁹ The patent claimant argued that the fact that the contracts would be printed brought the insurance plan within patentable subject matter, but the court rejected this position because the court found “no physical construction or combination that can convert it from a mere contract into a tangible device or manufacture,” and because “the form of such contracts or proposals for contracts, devised or adopted as a method of transacting a particular class of this business, is not patentable as an art.”¹¹⁰

The Second Circuit, in *Guthrie v. Curlett*, put a sharper edge on the *Moeser* line of reasoning.¹¹¹ In *Guthrie*, “the patent claimed a ‘consolidated tariff index’ that combined tariff information for a number of railroads into one convenient source and conveyed the information by a system of symbols.”¹¹² The court held that the claimed patent fell outside the realm of patent law because it articulated not a manufacture but an art that fell outside the kind of art protected by patent law.¹¹³ “Patent law, said the court, is ‘prosaically practical’ and allows only protection of the means for carrying out an idea. One can monopolize a business system only by patenting such means.”¹¹⁴

The rule that emerges from these early business method patent cases is that inventions that have a physical component, and that enable or make practical a method of doing business, are patentable, but the abstract business method itself is not.¹¹⁵ Over time, however, court decisions increasingly dismissed out-of-hand patent claims for business methods. Several early decisions had begun to explore the nuances of business method patents, but these decisions were abandoned for the more easily applied *Hotel Security* rule.¹¹⁶

B. *The Fall of an Exception through Administrative and Judicial Policy Changes*

As computer technology and its associated abstract patent claims came of age, the USPTO began to rethink business methods. In 1996, the USPTO removed from its claim evaluation manual the guideline stating

108. Durham, *supra* note 79, at 1490–91.

109. *In re Moeser*, 123 U.S. Pat. Off. Official Gazette 685 (D.C. Cir. 1906).

110. *Id.* at 656.

111. *Guthrie v. Curlett*, 10 F.2d 725 (2d Cir. 1926).

112. Durham, *supra* note 79, at 1490 (citing *Guthrie*, 10 F.2d at 725–26.)

113. *Guthrie*, 10 F.2d at 726.

114. Durham, *supra* note 79, at 1490.

115. *Id.* at 1491.

116. Del Gallo, *supra* note 96, at 408.

that business method patents may be considered per se unpatentable subject matter.¹¹⁷ The floodgates opened in 1998, when the Federal Circuit asserted in dicta in *State Street* that the business method exception was misguided and unwarranted,¹¹⁸ making irrelevant the business method patent problem with which the early courts struggled. The question facing earlier courts was, "Is the invention an abstract idea about doing business, or is it a tangible means, equivalent to a time clock or a cash register, which is patentable subject matter even if it happens to be used in business?"¹¹⁹ This inquiry is irrelevant after *State Street*, having been replaced by an inquiry into the utility of the claimed invention.¹²⁰

Since *State Street*, the number of business method patent applications and infringement claims has exploded,¹²¹ driven in large part by the rise of the Internet and e-commerce.¹²² The amount of business conducted via the World Wide Web has increased at a geometric rate since the early 1990s, with continued substantial growth expected, providing a strong incentive for businesses to take advantage of this new medium and market.¹²³ Conducting business via the Internet, while lucrative, requires businesses to expose their business methods and their supporting technologies in ways that make it easy for competitors to appropriate those methods and technologies (e.g. a computer hacker can invade a website's supporting software to uncover how business on that site is done). Business method patents provide innovators a powerful weapon to wield against those who inappropriately infiltrate or imitate patented business methods.

The effect that *State Street* had on business method patents makes it important to understand the case and how, exactly, it impacted U.S. patent law. The *State Street* litigation arose from a patent granted in 1993 to Signature Financial Group, Inc. ("Signature") protecting a data processing system designed to improve Signature's method of valuing its investments. The patented system is a hub and spokes configuration, with Signature's investment portfolio serving as the hub to the spokes that are Signature's multiple mutual fund investments.¹²⁴ Using its patented system, Signature can calculate and store data representing the percentage share that each spoke holds in the aggregate hub portfolio.¹²⁵

117. Grusd, *supra* note 2, ¶ 16.

118. *State St.*, 149 F.3d at 1375.

119. Durham, *supra* note 79, at 1491.

120. *State St.*, 149 F.3d at 1375.

121. Dreyfuss, *supra* note 20, at 267-68.

122. Wiese, *supra* note 55, at 18-19.

123. *Id.*

124. *State St. Bank and Trust Co. v. Signature Fin. Group, Inc.*, 927 F. Supp. 502, 504-05 (D. Mass. 1996) (overturned on unrelated facts).

125. *Id.*

Signature also can use its system to track and to update daily activity affecting both the hub portfolio's assets and the gains and losses associated with individual spokes; this data is then used to determine year-end financial data for accounting and tax purposes.¹²⁶ "Essentially, the system functions to input, process, store and retrieve data from the storage medium."¹²⁷

Despite the administrative difficulties associated with the hub and spoke system, such an investment structure is highly desirable for those capable of managing it. Indeed, commentator Claus Melarti has noted that:

[T]he system avoids legal restrictions against commingling assets of disparate mutual funds by allowing for two or more mutual funds—so-called spokes—to combine their assets in a common second-generation investment portfolio—the so called hub. The purpose of such an arrangement is to pool common expenses in order to realize economies of scale and to reduce the proportionate fraction of costs. Additionally, such an arrangement results in tax advantages, and allows for small funds (previously precluded from operating due to prohibitively large expenses) to pool their assets and to become attractive to investors.¹²⁸

This system overcomes the unwieldy and costly administrative components associated with the hub and spoke fund management system, most notably the fluctuation in the value of each spoke resulting from stock market activity and from investor deposits and withdrawals.¹²⁹

Signature's patented system negotiates these difficulties with a processing system that quickly calculates and records data required for effective management of each of the mutual fund spokes.¹³⁰ As Melarti has described:

The data processing system determines the percentage share (allocation ratio) that each fund has in the portfolio, while taking into consideration daily changes both in the value of the portfolio's investment securities (as determined by market prices) and in the amount of each fund's assets (as determined by daily shareholder purchases and redemptions).¹³¹

126. *Id.* at 505.

127. Gabay, *supra* note 32, at 209.

128. Melarti, *supra* note 29, at 377.

129. *Id.* at 378.

130. *Id.*

131. *Id.*

In addition to this monitoring function, the system facilitates administration of the portfolio by “allocat[ing] to each fund the portfolio’s daily income, expenses, and net realized and unrealized gain or loss.”¹³²

Seeking the benefits of Signature’s patented system, State Street Bank & Trust Co. (“State Street”) entered into negotiations with Signature for a license to use the hub and spoke system, but negotiations soon broke down.¹³³ State Street subsequently brought a lawsuit praying that the Signature patent be invalidated because it was within the mathematical algorithm and business method exceptions.¹³⁴ Note that the court’s reasoning on the mathematical algorithm exception is tangential to the subject of this discussion, and will be set aside for the remainder of this article.

The District Court agreed with State Street on both assertions, and Signature appealed to the Federal Circuit.¹³⁵ The Federal Circuit reversed the District Court on both counts in a decision that dramatically changed the doctrine.¹³⁶ Judge Giles S. Rich, writing for the majority, began his opinion by emphasizing the expansiveness of Section 101 of the Patent Act, which establishes that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvements thereof, may obtain a patent therefor.”¹³⁷ The court stated that the plain and unambiguous meaning of this statutory language is that “any invention falling within one of the four stated categories of statutory subject matter may be patented provided it meets the other requirements . . . [of sections] 102, 103, and 112.”¹³⁸ Section 101 is to be read expansively to reflect congressional intent made clear by the two usages of the word “any,” and no restriction beyond those specifically stated in Section 101 should be imposed on the patentable subject matter set forth in that section.¹³⁹ In effect, the *State Street* court changed the patentability inquiry from whether a claimed invention fits into a statutory category to whether Section 101 excludes by its own terms that claimed invention.

Upon reaching the merits of the business method patent claim, the court dealt with the problematic business method exception by obliterating it: “We take this opportunity to lay this ill-conceived exception to

132. *Id.*

133. State St., 927 F. Supp. at 506.

134. *Id.*

135. *Id.* at 517.

136. State St., 149 F.3d 1368.

137. State St., 149 F.3d at 1372 (quoting 35 U.S.C. § 101 (1994)).

138. *Id.*

139. *Id.* at 1373.

rest.”¹⁴⁰ The court went on to assert that “[s]ince the 1952 Patent Act, business methods have been, and should have been, subject to the same legal requirements for patentability as applied to any other process or method.”¹⁴¹ According to the *State Street* court, this statement was simply an articulation of a position to which the Federal Court of Appeals had adhered all along, as “the business method exception has never been invoked by this court, or the CCPA [Court of Customs and Patent Appeals, which heard patent appeals before the Federal Circuit was given that duty] to deem an invention unpatentable.”¹⁴² Those previous cases thought to have applied the business method exception to invalidate patents actually involved “some clearer concept of Title 35 or, more commonly, application of the abstract idea exception based on finding a mathematical algorithm.”¹⁴³ The *State Street* court further pointed out that even in *Hotel Security*—the case commonly considered to be the source of the business method exception¹⁴⁴—the Second Circuit did not rely on the business method exception.¹⁴⁵ Rather, the *Hotel Security* court invalidated the patent at issue in that case because the invention lacked the requisite novelty.¹⁴⁶

The final justification the court gave for the elimination of the business method exception was the recent change in the U.S. Patent Office’s Examination Guidelines regarding the exception.¹⁴⁷ The 1994 Examination Guidelines included language in keeping with the business method exception,¹⁴⁸ while the 1996 Examination Guidelines eliminated the language imposing restrictions on statutory subject matter.¹⁴⁹ The U.S. Patent and Trademark 1996 Examination Guidelines for Computer-Related Inventions reads: “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”¹⁵⁰

140. *Id.* at 1375.

141. *Id.*

142. *Id.*

143. *Id.*

144. *Id.* at 1376.

145. *Id.*

146. *Id.*

147. *Id.* at 1377.

148. The 1994 Manual of Patent Examining Procedure (“MPEP”) reads: “Though seemingly within the category of a process or method, a method of doing business can be rejected as not being within the statutory classes.” MPEP § 706.03(a) (1994).

149. *State St.*, 149 F.3d at 1377 (comparing MPEP § 706.03(a) (1994) with MPEP § 706.03(a) (1996)).

150. Examination Guidelines for Computer-Related Inventions, 61 Fed. Reg. 7478, 7479 (Feb. 28, 1996).

The result of this expansive reading of Section 101, coupled with the position that a business method patent claim is just like any other process patent claim, is that courts no longer have to determine which types of process claims are in and which are out. Prior to *State Street*, the unwieldy inquiry was whether the business method met the statutory requirements for patent protection as a process:

No patent may be obtained for any discovery, “however useful, novel, and nonobvious, unless it falls within one of the enumerated [sic] categories.” The most difficult of these categories to define has been “process.” Any activity may be considered, in a broad sense, a “process,” yet some activities—the solving of a mathematical formula, the composition of a piece of music, the operation of a business—may be incompatible with the common idea of a patentable invention. When such conflicts arise, the constitutional reference to the “useful arts” provides an interpretive touchstone.¹⁵¹

The *State Street* court sidestepped this thorny question by reformulating the test for determining whether a patent in question claims patentable subject matter under 35 U.S.C. § 101. Relying on its expansive reading of Section 101, the *State Street* court articulated the Section 101 patentable subject matter standard as a single inquiry for all patent claims that does not consider the type of subject matter claimed: “The question of whether a claim encompasses statutory subject matter should not focus on *which* of the four categories of subject matter a claim is directed to—process, machine, manufacture, or composition of matter—but rather on the essential characteristics of the subject matter, in particular, its practical utility.”¹⁵²

By reducing Section 101 subject matter inquiry into a single question of “practical utility,” the *State Street* court greatly increases the number and type of inventions that may obtain patent protection; many more inventions are practically useful than can be fit into one of four discrete enumerated categories. The *State Street* court’s decision on the merits indicates that this expansion in patentable subject matter is greater than the language the standard might initially suggest: “The usefulness of results appears to be a low threshold for patentability, as illustrated by the court’s conclusion that ‘the transformation of data, representing discrete dollar amounts . . . into a final share price’ is patentable.”¹⁵³

151. Durham, *supra* note 79, at 1428–29 (quoting *Kewanee Oil*, 416 U.S. at 483.

152. *State St.*, 149 F.3d at 1375.

153. Keeley-Domokos, *supra* note 28, at 170 (quoting *State St.*, 149 F.3d at 1373).

The expansive nature of the practical utility inquiry, coupled with the abolition of the business method exception, indicates that the “standards pertaining to the patentability of inventions involving business methods have . . . been significantly relaxed” to the point that business method patents are likely to be upheld if challenged.¹⁵⁴ “[I]t is important to note that *State Street* apparently makes patentable *all business methods*: although the case itself was about a computer-implemented business method, the language of the opinion is extremely broad.”¹⁵⁵ Under *State Street*, the only apparent limit on business method patents is human imagination.

C. Congressional Action in the Aftermath

In addition to providing fodder for numerous academic and practitioner articles, the elimination of the business method exception in *State Street* also triggered action amongst lawmakers. Responding to concerns voiced in the aftermath of the *State Street* decision, the U.S. Congress passed the American Inventors Protection Act of 1999—more commonly called the First Inventor Defense Act of 1999—which provides a legal defense to an infringement enforcement action brought pursuant to a business method patent.¹⁵⁶ Specifically, Section 273 of the First Inventor Defense Act (FIDA) provides an affirmative defense against a business method patent enforcement action if the defendant in the action “had, acting in good faith, actually reduced the subject matter to practice at least 1 year before the effective filing date of such patent, and commercially used the subject matter before the effective filing date of such patent.”¹⁵⁷ Signed into law by President Clinton in September 1999, FIDA protection is designed to comfort to businesses facing a broadly expanded patent system that now covers technology and practices that had for years been considered unpatentable subject matter.¹⁵⁸ Nonetheless, defending oneself from a business method patent enforcement action remains an expensive and tedious process. Even when one is eligible for the first inventor defense, one still must engage in expensive

154. *Id.* at 171–72; see also John M. Carson & Eric M. Nelson, *Legal Victory for Electronic Commerce Companies: State Street Bank & Trust v. Signature Financial Group Signals Fall of Last Barrier to Internet Software Patents*, 21 T. JEFFERSON L. REV. 193 (1999) (assessing the scope of the *State Street* reasoning, and forecasting its effect on subsequent patent law jurisprudence).

155. Dreyfuss, *supra* note 20, at 267 (*emphasis added*).

156. 35 U.S.C.A. § 273 (West 2001).

157. *Id.*

158. Pat Costello, *Legal Update, New Law Creates a Patent Infringement Defense and Restructures the Patent and Trademark Office*, 6 B.U. J. SCI. & TECH. L. 16 (2000).

litigation where one bears the burden of affirmatively raising and proving the defense.

Other legislative approaches have been suggested to address the problem of patents improperly issued for non-novel business methods. One such proposal is "to reform the existing patent reexamination system by expanding the opportunities for members of the public to challenge the validity of issued patents in an administrative setting," an approach codified at 35 U.S.C. §§ 301-07.¹⁵⁹ This approach, though well-intended, has been soundly criticized by Professor Mark Janis as an ultimately ineffective and burdensome attempted reform.¹⁶⁰

According to Professor Janis, the traditional patent reexamination process fails where business method patents are concerned because the reexamination process restricts evidence of prior art to documentary prior art.¹⁶¹ Such an evidentiary restriction eliminates the possibility of introducing evidence of prior art on the theory of compliance with commonly shared but not officially documented industry standards, or on any other potentially enlightening theory.¹⁶² Professor Janis also criticizes the administrative structure of the business method patent reexamination proceedings, which are conducted in an administrative setting by patent examiners.¹⁶³ Patent examiners historically have been hostile to patent reexamination, and they lack the training and experience to conduct administrative hearings with efficiency and fairness.¹⁶⁴ These structural problems with the revised reexamination procedure are made worse by the challenging party's restricted ability to appeal the administrative decision to an independent United States District Court for judicial review.¹⁶⁵

Critics of the reformed business method reexamination process have had little good to say about it. In fact, some who have discussed the reforms in detail are so dissatisfied with the changes that they do not bother to demonstrate the verbal restraint ordinarily seen in formal criticism. For example, Professor Janis summed up his critique of reexamination process reforms as follows:

To put it pointedly, *inter partes* reexamination [the new reexamination process] is a dog. Its substantive scope is too narrow, its procedural assurances of meaningful third-party participation

159. Mark D. Janis, *Inter Parties Patent Reexamination*. 10 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 481, 482 (2000).

160. *Id.* at 498.

161. *Id.* at 485-86.

162. *Id.* at 486-87.

163. *Id.* at 490.

164. *Id.*

165. *Id.* at 491-92.

are questionable, its appeal provisions are too limited, and its estoppel provisions are excessive. It is the conclusion of a well-intentioned, but conceptually incongruous legislative exercise: Congress began with a statute [sic] that was designed to enable the PTO to correct a limited range of its errors, and attempted to transform it into an administrative revocation scheme that could serve as an alternative to litigation, without making fundamental alterations. What resulted is a proceeding that is likely to confuse and annoy its participants, few though they may be.¹⁶⁶

Given that the new reexamination process is so deeply flawed, one might expect further reforms to the patent reexamination process, but it does not appear that an attempt to reform the reform is coming any time soon. A search of proposed bills and other Congressional documents revealed no efforts to address and to define, much less to resolve, problems with the new reexamination process.¹⁶⁷

III. BUSINESS METHOD PATENT LITIGATION AFTER *STATE STREET*

A. *Nonobviousness and Prior Art Stressed when Evaluating Business Method Patent Claims*

Though there are no impending legislative changes, patent law as it pertains to business methods has continued to evolve in court decisions. Perhaps the most famous business method patent litigated after *State Street* is Amazon.com's "One-Click" ordering system. This system enables Amazon.com (hereafter "Amazon") to identify individual customers who shop repeatedly from the same Internet portal, and to facilitate the shopping experience of these customers by enabling these customers—with one click of the designated Website icon—to store selected merchandise in order until all the merchandise selected during a visit to Amazon's website; these selections then are ordered using previously stored data.¹⁶⁸ Amazon's system is, essentially, a sort of online shopping cart and checkout counter in one. In highly publicized litigation, Barnesandnoble.com (hereafter "BN") challenged the validity of this patent, claiming both that the patented invention was not nonobvious, and that it was not novel (i.e. it was not sufficiently new and different as compared to the prior art that supported its creation).¹⁶⁹

166. *Id.* at 498.

167. <http://www.lexis.com> (search conducted by author Feb. 1, 2002).

168. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1347 (Fed. Cir. 2001).

169. *Id.*

The Federal Circuit, in *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, struck a major blow against Amazon's patent, though it did not invalidate the patent as a matter of law.¹⁷⁰ Instead the *Amazon.com* court remanded the case to the District Court for further proceedings, with instructions to revisit the issues of nonobviousness and novelty in a fashion that made it difficult for Amazon's ordering system patent to survive a patentability challenge.¹⁷¹ The Federal Circuit indicated that the district court had adopted a standard of nonobviousness that was too lenient towards Amazon's patent claims:

[T]he district court apparently based its conclusion of nonobviousness on Dr. Lockwood's [one of BN's software designers and expert witness] "admission" that he personally never thought of combining or modifying the prior art to come up with the claimed "single action" invention. This approach was erroneous as a matter of law. Whatever Dr. Lockwood did or did not *personally* realize at the time based on his actual knowledge is irrelevant. The relevant inquiry is what a hypothetical ordinarily skilled artisan would have gleaned from the cited references at the time that the patent application leading to the '411 patent [Amazon's disputed ordering system patent] was filed.¹⁷²

As a part of this reconsideration upon remand, the Federal Circuit further instructed the District Court to take into account previously disregarded evidence of prior art. The District Court was to include in its nonobviousness inquiry various examples provided by BN of published works and Web pages that discussed the possibility, permutations, and operations of a single-click ordering system well before Amazon filed its "One-Click" patent claim.¹⁷³ These examples, the Federal Circuit explained, might constitute invalidating prior art, and so should be considered.¹⁷⁴

The broad "One-Click" patent claim, granted by the USPTO despite its broad language and minimal disclosure of prior art, seems to have come back to haunt Amazon. And while the Federal Circuit did not invalidate the patent as a matter of law, it did send a clear message that business method patent claims are to be held to the same high standards of nonobviousness and novelty to which other types of patents are held.¹⁷⁵ Simply having a clever idea with a marketing hook might have

170. *Id.* at 1366.

171. *Id.* at 1364-65.

172. *Id.* at 1364.

173. *Id.*

174. *Id.* at 1364-65.

175. *See id.* 1366.

been enough to satisfy the USPTO, but it seems that it is not enough to satisfy the Federal Circuit.

B. *Measuring and Countering Broad Process Patent Claims*

1. Relevant Federal Circuit Court Decisions after *State Street*

The Court of Appeals for the Federal Circuit began to address some of the concerns and unanswered questions created by the *State Street* decision in *Wang Laboratories, Inc. v. America Online, Inc. and Netscape Communications Corp.*, in which AOL and Netscape successfully argued to limit the scope of a patent on Internet browser software governing bookmark functions.¹⁷⁶ While this case does not involve a challenge to a business method patent, it does involve an Internet-related patent, the context in which most business method patents (and thus, challenges to business method patents) have arisen in recent years. Furthermore, *State Street* made it quite clear—albeit in dicta—that business method patents are to be treated no differently than any other process patent,¹⁷⁷ an approach the Federal Circuit explicitly endorsed in *Amazon.com*.¹⁷⁸

Two commentators have interpreted *Wang* to be an effort by the Federal Circuit to provide some boundaries for the free-for-all environment created by the sweeping language in *State Street*. Daniel Harris and Janice Chan assert that *Wang* is a clear indicator of patent jurisprudence to come. “Judicial interpretation of patent claims, commonly referred to as claim construction, appears to be the next battleground in the fight over Internet patents . . . [*Wang*] provides some indication that courts will look to interpret Internet patent claims narrowly in an effort to control the impact on future innovation.”¹⁷⁹

Taken in isolation, the actual holding of *Wang*, which does little more than limit an Internet patent only to its specifically articulated forms, hardly seems worthy of such an assertion. Taken in context of preceding patent decisions, however, *Wang* does make a significant shift in the Federal Circuit’s attitude towards broad patentability and patents.

In a case predating *State Street*, *O.I. Corp. v. Tekmar Co., Inc.*, Tekmar defended a patent infringement suit initiated by O.I. by arguing

176. *Wang Laboratories, Inc. v. Am. Online, Inc. and Netscape Communications Corp.*, 197 F.3d 1377 (Fed. Cir. 1999).

177. *State St.*, 149 F.3d at 1377.

178. *Amazon.com*, 239 F.3d at 1364–65.

179. Daniel R. Harris & Janice N. Chan, Case Note, *Wang Laboratories, Inc. v. America Online, Inc. and Netscape Communications Corp.*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J. 449, 449–50 (2000).

that Tekmar did not infringe a method patent where that patent did not articulate a means for every step described in the process.¹⁸⁰ Reasoning from the principle that a patent need not describe every possible means that might be used in a possible apparatus in order for it to be enforceable, the Federal Circuit asserted that this general principle extends to the steps of process patents.¹⁸¹

When explaining the rationale underlying its decision, the *Tekmar* court rejected Tekmar's request to read O.I.'s patent narrowly: "If we were to construe every process claim containing steps describing an 'ing' verb, such as passing, heating, reacting, transferring, etc. into a step-plus-function limitation, we would be limiting process claims in a manner never intended by Congress."¹⁸² While the *Tekmar* court did not explicitly express a preference for reading process patents broadly, that it went beyond its holding and its supporting reasoning to explain broader policy arguments against reading process patents narrowly implies that broader reading is a favored or, at the very least, an acceptable option.

The *State Street* court exercised this broader reading option by upholding a broad patent claim construction that made it easier for Signature Financial to maintain its infringement suit against State Street.¹⁸³ In *State Street*, the Federal Circuit again went beyond the legal doctrines and precedents governing the case to discuss broader patent policy, this time to reject explicitly the business method exception.¹⁸⁴ These decisions, coupled with the Federal Circuit's pattern of expanding in dicta the scope of discussion to hint at future rulings, indicates a clear preference—and at the time of *State Street*, at least, a growing preference—for broad subject matter patentability and broad patent claim construction; no wonder Internet business companies suddenly rushed in droves to the USPTO to stake their claims. Despite this toleration of broad claims leading up to and including *State Street*, the Federal Circuit would not maintain this attitude for long.

The *Wang* court struck a decidedly different posture towards broad claim construction than that taken in earlier decisions by explicitly limiting the scope of an Internet patent, a type of patent it once went to great lengths—arguably overreaching—to construe broadly.¹⁸⁵ The process patent at issue in *Wang* was Wang's patent on a system for providing computer users with textual and graphical information from

180. *O.I. Corp. v. Tekmar Co., Inc.*, 115 F.3d 1576, 1583 (Fed. Cir 1997).

181. The patent in question involved a method for removing water vapor from a sample to be analyzed in a gas chromatograph. *O.I. Corp.*, 115 F.3d at 1578, 1582–83.

182. *Id.* at 1583.

183. *State St.*, 149 F.3d at 1377.

184. *Id.* at 1373–77.

185. *Wang*, 197 F.3d at 1381.

computer-controlled databases via an interactive two-way communication over a telephone line.¹⁸⁶ This patent articulated a system using character-based protocols when describing the system in detail, but Wang asserted that its patent applied generally to the underlying process, regardless of the particular manifestation of the system protocols.¹⁸⁷

AOL and Netscape developed a similar system that operated on bit-mapped protocols instead of character-based protocols, prompting Wang to bring a patent infringement suit against AOL and Netscape. The District Court ruled that despite the similarities of the two systems, AOL and Netscape had not violated Wang's patent because the protocols that enacted AOL and Netscape's system differed significantly from the protocols in Wang's system.¹⁸⁸ Wang could not assert an infringement of the broad process underlying the operation of its system because the particular protocols of the Wang system, as articulated in the Wang patent, limited the scope of that patent to systems using the same or equivalent protocols.¹⁸⁹ The District Court limited the scope of Wang's patent to find noninfringement, and Wang appealed.

Before the Federal Circuit, Wang argued that the character-based protocol did not limit the scope of the patent because the patent claim was for a broader system, and the character-based protocol appeared only in the portion of the patent providing a specification of how the patented system might be implemented.¹⁹⁰ Wang asserted that the character-based specification was but a preferred embodiment, the articulation of which did not limit the reach of the patented process underlying that preferred embodiment.¹⁹¹ The *Wang* court disagreed: "The usage 'preferred' does not of itself broaden the claims beyond their support in the specification. The only embodiment described in the '669 patent specification is the character-based protocol, and the claims were correctly interpreted as limited thereto."¹⁹²

The *Wang* court reached its decision by applying well-established patent claim construction principles, but this result still is something of a surprise. Four years and again just two years earlier, the Federal Circuit had gone out of its way in dicta to make clear the validity and expansiveness of Internet-related process and business method patents, but in *Wang* this same court read the patent claim narrowly by looking to real-world formulations and applications instead of relying solely on the

186. *Id.* at 1379–80.

187. *Id.* at 1379–81.

188. *Id.* at 1379–80.

189. *Id.* at 1379–80, 1382–83.

190. *Id.* at 1382–83.

191. *Id.* at 1383.

192. *Id.* (citations omitted).

broad language of the patent claim. The *Wang* court noted that “expert testimony” indicated that the protocols, despite the fact that they are interchangeable as modules inserted into the same system, “function in accordance with markedly different principles, have greatly different capabilities, and generally do not operate in the same way.”¹⁹³ The *Wang* court also pointed out that Wang ceased to pursue the protocols used by AOL and Netscape because they presented technological difficulties within Wang’s patented system, and that Wang had previously stated that another competitor’s bit-mapped system was substantially different from its own character-based system.¹⁹⁴ The factors in the world beyond the broad patent language, the *Wang* court reasoned, indicated that Wang’s broad patent should be limited to its considerably narrower specification.¹⁹⁵

The *Wang* court never explicitly states that, as a general matter, broad process patent claims should be limited to the narrower specifications within the patent, but it does provide hope to those developing new Internet-related technologies in a field littered with broadly-worded patents. And since *State Street* made it clear that business method patents are not to be treated differently than Internet or software related patents, businesses now have an indication of how to avoid business method patent infringement. The larger systems of data transfer in *Wang* clearly were substantially similar, but the court looked past the broad language describing this system to limit the patent to the system described that actually implemented the process. Harris and Chan just might be right when they encourage defendants in process patent infringement suits to “scour the patent specification for language restricting its [the patent’s] application” when the patent holder asserts broad claims based on general language in the patent.¹⁹⁶

2. District Court Application of a Potential Doctrinal Shift

Harris and Chan’s enthusiasm for reading patents narrowly based on patent specifications has not been shared by district courts addressing method patent claims subsequent to *Wang*, if only because no district court has yet addressed the scope of a business method patent in light of potentially limiting language found in its patent specification. However, several post-*Wang* District Courts have decided challenges to high-tech method patents (many of which involved Internet or software patent claims) brought on the theory that the patent specification in each case

193. *Id.* at 1385.

194. *Id.*

195. *Id.* at 1385.

196. Harris, *supra* note 179, at 455.

limited the patent claim. Of these, several courts have used patent specifications to limit patent claims, and several have not. None of the courts applying *Wang* to limit a process patent claim to its patent specification have explicitly indicated that they regard *Wang* as a major shift in patent construction; these courts merely have applied *Wang*, without substantial comment, to limit overly broad claims.¹⁹⁷ This body of law still is very much unsettled, and at this point it remains to be seen whether Harris and Chan will get their way.

Several district courts have ruled against requests to limit method patent claims to the embodiments articulated in the patent specification. In *Charles E. Hill & Associates, Inc. v. Compuserve, Inc.*, the Indiana Southern District Court declined to limit the patent claim for an electronic catalog system to a single step for integrating data in a computer monitor display, reasoning that “the court should not limit the invention to the specific examples or preferred embodiment found in the specification.”¹⁹⁸ In *CIVIX-DDI, LLC v. Microsoft Corp.*, the Colorado District Court adopted the approach in *Tekmar* over the approach in *Wang* on the grounds that the *Tekmar* approach did not limit process patent claims to the patent specification.¹⁹⁹ Most notably, the Northern California District Court—obviously a hotbed of Internet, software, and related business method patent litigation—clearly stated its position against using patent specifications to limit more broadly worded patent claims: “Method claims, unlike means-plus-function claims, are not limited to the structures disclosed in a specification for the performance of the method.”²⁰⁰

More recent district court decisions, however, have limited overly broad process patent claims on language in the patent specification, indicating a potential shift in attitude at the district court level. At least three district courts have approached overly broad process patents in this way. The Northern Texas District Court was the first to do so in *Innovad, Inc. v. Microsoft Corp.*, where it cited *Wang* to explain that “[j]ust as claims may not be limited to preferred embodiments, claims may not be broadened beyond the scope supported by the specification.”²⁰¹ Noting that the telephone dialer system at issue, described in the patent specification as operating via a keypad of limited function, the *Innovad* court held that a

197. *Id.* at 449–50.

198. *Charles E. Hill & Assoc., Inc. v. Compuserve*, 65 F. Supp. 2d 924, 927 (S.D. Ind. 1999).

199. *CIVIX-DDI, LLC v. Microsoft Corp.*, 84 F. Supp. 2d 1132, 1149 (D. Colo. 2000).

200. *Sandisk Corp. v. Lexar Media*, 91 F. Supp. 2d 1327, 1333–34 (N.D. Cal. 2000) (*citing Tekamar*, 115 F.3d at 1583).

201. *Innovad, Inc. v. Microsoft Corp.*, 99 F. Supp. 2d 767, 772 (N.D. Tex. 2000).

similar dialer system operated with a standard keyboard did not infringe the patent because it was outside the scope of the patent claim.²⁰²

In *IPPV Enterprises v. Echostar Communications Corp.*, the Delaware District Court used the patent specification for a method of encoding and decoding television signals to limit the scope of the patent.²⁰³ IPPV's patent claim was broadly worded in an effort to reach subsequently developed technologies, but the patent specification articulated the encoding-decoding method using technology available at the time the patent was acquired, namely, analog television signals. Echostar later developed a similar encoding-decoding system based on digital technology, prompting IPPV to bring an infringement suit.²⁰⁴ After noting that a patentee is entitled to claims broader than the scope of the patent's disclosure, the *IPPV* court made it clear that patent claims cannot extend beyond the technology the patentee actually has achieved and patented: "The purpose of the written description requirement is to ensure that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor's contribution to the field of art as described in the patent specification."²⁰⁵ Because IPPV sought to extend its method patent claim to a subsequently developed technology, the *IPPV* court turned for guidance to *Wang*, concluding that "[w]hen a claim is written sufficiently broadly to cover after-developed technologies, the claims may be construed to limit their scope to those technologies disclosed in the written description of a patent."²⁰⁶ The *IPPV* court then held that because the literal scope at the time IPPV filed the patent application was for a method of encoding and decoding analog television signals, and because Echostar's encoding-decoding system depended on new and different digital technology, Echostar's digital technology was outside the scope of IPPV's patent claim.²⁰⁷

The Massachusetts District Court reached a similar result in *Biogen, Inc. v. Berlex Laboratories, Inc.*, where the court read narrowly the scope of a patent for recombinant DNA technology as used in cells to be used in treatment for multiple sclerosis.²⁰⁸ Noting that "the patentee's competitors . . . are entitled to clear and specific notice of what the inventor claims as his invention," the *Biogen* court addressed the problem of a broadly worded statute by interpreting *Wang* as standing for the principle

202. *Id.* at 772-74.

203. *IPPV Enterprises v. Echostar Communications Corp.*, 106 F. Supp. 2d 595, 601-02 (D. Del. 2000).

204. *Id.* at 596-97.

205. *Id.* at 605.

206. *Id.* (citing *Wang*, 197 F.3d at 1383).

207. *Id.* at 606.

208. *Biogen, Inc. v. Berlex Laboratories, Inc.*, 113 F. Supp. 2d 77, 80 (D. Mass. 2000).

that a court may read patent claims narrowly, confining the claims to those embodiments articulated in the patent specification.²⁰⁹ Because each of the embodiments described in the patent specification involved the use of a particular gene—the DHFR gene—that did not appear in the competitor’s method, the court limited the scope of the patent to those embodiments utilizing the DHFR gene.²¹⁰

Courts have not yet worked out the standard for interpreting and applying *Wang*, and this is likely to remain the case until the Federal Circuit Court clarifies the issue. It is worth noting, however, that those decisions in which courts declined to apply *Wang* in a limiting fashion were decided before the cases in which courts read *Wang* as standing for the principle that method patent claims could be limited to their patent specifications, which suggests that courts are becoming more receptive to requests to limit broad process patents.

3. Litigation and Patent Application Strategies During These Unsettled Times

The recent trend amongst district courts of using patent specifications to limit overly broad process patent claims might indicate that the claim-limiting way of reading *Wang* espoused by Harris and Chan has won over courts, but it would be unwise to assume that the matter is settled. Until the Federal Circuit Court definitely resolves the issue of how to construct process patent claims (and, thus, business method patent claims), the approach of poring over patent specifications to locate limiting language remains a sound but tedious option when faced with a process patent infringement suit.

Those facing a patent infringement suit should search patent specifications for language or embodiments that might be used to limit the reach of more generally worded patent claims. Furthermore, given the Federal Circuit’s emphasis on nonobviousness and novelty in *Amazon.com*, patent infringement defendants should examine the portions of the plaintiff’s patent filings detailing those claims. An evidentiary demonstration that the USPTO did not properly consider nonobviousness or prior art, as it relates to novelty, might persuade a court to look more skeptically at the validity of the patent underlying the infringement suit. This is an imprecise and uncertain method of defending against patent infringement suits, to be sure, but it is the best option available given the current state of the law.

Similarly, those filing for new business method patents (or any other process patent, for that matter) should keep recent district court applica-

209. *Id.* at 95, 101.

210. *Id.* at 104.

tions of *Wang* in mind when articulating their patent claims. Patentees should take care to include in their patent specifications as many embodiments and permutations of their claimed processes as possible, and do so with language that describes the claimed process with some specificity without reading too narrowly.