

Drafting Business Method And Software Claims In A Post *Bilski*, *Muniauction* And *NTP* World



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“The specification and claims of a patent, particularly if the invention be at all complicated, constitute one of the most difficult legal instruments to draw with accuracy [and] valuable inventions are often placed in the hands of inexperienced persons to prepare such specifications and claims...” — *Topliff v. Topliff*, 145 U.S. 156, 171 (1892).

IN THE last decade, software and so-called business method patents have been the subject of numerous lawsuits, academic debates and journal articles, economic impact studies, congressional hearings, and articles written in mainstream, non-legal media. The conversations surrounding these patents have been spirited—to say the least—with many arguing that software and business methods should not be eligible for patent protection under the U.S. patent laws. Since the decision in *State Street Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999), many thought the issue was settled in favor of patent eligibility for such innovations. However, a recent decision by the U.S. Court of Appeals for the Federal Circuit, *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc), has once again brought the spirited debate to the forefront. Further, another Federal Circuit decision from the latter half of 2008—*Muniauc-*

tion, Inc. v. Thomson Corp., 532 F.3d 1318 (Fed. Cir. 2008), *cert denied*, 525 U.S. 1093 (1999)—has called into question claim drafting techniques long used by practitioners in software and business method patents. Given *Bilski* and *Muniauction*, this article examines their holdings and attempts to provide patent practitioners with some guidance in drafting patent claims to adequately protect their clients' software and business method inventions.

DEFINING SOFTWARE AND BUSINESS METHODS • In order to properly frame the scope of this article, let us first define the types of inventions that can be labeled or classified “software” and “business methods.”

“Software” inventions are commonly understood to mean inventions that are essentially sets of programs (or instructions) that control how a computer (i.e., the hardware) operates. That is, to borrow from the Copyright Act, “computer program” refers to “a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.” 17 U.S.C. §101.

With respect to “business methods,” however, a statutory (or even standard) definition is lacking. The Federal Circuit refused to define the term in *State Street*, Section 101 of Title 35 (“Inventions patentable”) does not address it, and the First Inventor Defense Act of 1999 contains the circular and non-helpful definition: “‘method’ means a method of doing or conducting business.” 35 U.S.C. §273(a) (3). Under such an imprecise definition, one could argue that a patent containing method claims directed to processing meat is a “method of doing or conducting business,” especially if you are a fast-food chain in the business of selling hamburgers. These types of patents, however, have not been the subject of the spirited academic, economic, judicial and legislative debates referred to above. Rather, these so-called business method patents have been filed and obtained by software, insurance, Wall Street, and e-commerce firms. Thus, the author

proffers the following definition of “business method” to frame the scope of the discussion below:

“A *process* (performed by software or manually) employed in an entity’s business model in order to perform services related to insurance, securities trading, health care management, reservation systems, electronic shopping, auction systems, catalog systems, incentive programs, redemption of coupons, banking, billing, point of sale systems, accounting, inventory management and the like.”

HOW DID WE GET HERE? THE *STATE STREET* DECISION • Before discussing *Bilski*, it is worth briefly examining the Federal Circuit’s decision in *State Street* over 10 years ago.

In *State Street*, while affirming that pure mathematical algorithms remain per se unpatentable, a three-judge panel of the Federal Circuit took the “opportunity to lay th[e] ill-conceived [business method] exception to rest.... [B]usiness methods have been, and should have been, subject to the same legal requirements for patentability as applied to any other process or method.” 149 F.3d at 1375. The court went on to add that “[w]hether the claims are directed to [patentable] subject matter...should not turn on whether the claimed subject matter does ‘business’ instead of something else.” *Id.* at 1377. Rather, any method that can be described as a whole in a manner in which it produces “a useful, concrete and tangible [i.e., ‘real-world’] result,” is eligible for patent protection. *Id.* at 1373. The claim at issue in *State Street* read:

“A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:
(a) computer processor means for processing data;

- (b) storage means for storing data on a storage medium;
- (c) first means for initializing the storage medium;
- (d) second means for processing data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds['] assets and for allocating the percentage share that each fund holds in the portfolio;
- (e) third means for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;
- (f) fourth means for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and
- (g) fifth means for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds.”

See U.S. Patent No. 5,193,056 at claim 1. The *State Street* court reasoned that claim 1 was directed to a machine “namely, a data processing system for managing a financial services configuration of a portfolio established as a partnership.” *Id.* at 1372. The court then noted that, for the purposes of a Section 101 analysis, “it is of little relevance whether claim 1 is directed to a ‘machine’ or a ‘process,’ as long as it falls within at least one of the four enumerated categories of patentable subject matter [specified in 35 U.S.C. Section 101], ‘machine’ and ‘process’ being such categories.” *Id.* Thus, for the past decade, the patent bar, the US Patent and Trademark Office (USPTO), the federal district courts and the Federal Circuit proceeded under the “useful, concrete and tangible result” test with a great number of software and business method patents issued by the USPTO and their validity upheld by the courts.

THE *IN RE BILSKI* DECISION • In its October 2008 en banc *Bilski* decision, the Federal Circuit revisited its *State Street* holding. The court recognized that the Supreme Court last looked at the patentability of processes and software over a quarter century ago in *Diamond v. Diehr*, 450 U.S. 175 (1981) (holding that a claim is not a patent-eligible “process” under Section 101 if it claims “laws of nature, natural phenomena, and abstract ideas”). In *Bilski*, the representative claim at issue read:

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

- (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
- (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
- (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.”

Id. at 949. The claim had been rejected by the USPTO under Section 101, and thus the issue before the court was: “[W]hether Applicants are seeking to claim a fundamental principle (such as an abstract idea) or a mental process. And the underlying legal question thus presented is what test or set of criteria governs the determination by the [USPTO] or courts as to whether a claim to a process is patentable under [Section] 101 or, conversely, is drawn to unpatentable subject matter

because it claims only a fundamental principle.” *Id.* at 952.

Chief Judge Michel, writing for the nine-to-three majority, took great pains to recapitulate, and adhere to, the Supreme Court’s holding in *Diehr* and its eligible patent subject matter jurisprudence. Chief Judge Michel observed:

“The Supreme Court, however, has enunciated a definitive test to determine whether a process claim is tailored narrowly enough to encompass only a particular application of a fundamental principle rather than to pre-empt the principle itself. A claimed process is surely patent-eligible under §101 if: (1) *it is tied to a particular machine or apparatus, or* (2) *it transforms a particular article into a different state or thing.*”

Id. at 954 (citing *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)) (emphasis added). The court went further and concluded that the “‘useful, concrete and tangible result’ inquiry [of *State Street*] is inadequate and reaffirm[ed] that the machine-or-transformation test outlined by the Supreme Court [in *Benson*] is the proper test to apply.” *Id.* at 959-60. The Federal Circuit also enumerated two corollaries to its “new” test for determining whether a claim to a process is patentable under Section 101: (1) “mere field-of-use limitations are generally insufficient to render an otherwise ineligible process claim patent-eligible;” and (2) adding “insignificant postsolution activity will not transform an unpatentable principle into a patentable process.” *Id.* at 957.

Given the foregoing, the Federal Circuit affirmed the USPTO’s rejection of the claims at issue in *Bilski*, finding them to completely fail the “machine-or-transformation” test by simply reciting the exchange of legal rights “to purchase some commodity at a given price in a given time.” *Id.* at 964. The good news for those who innovate in

the software and business method spaces (and the practitioners who represent them), however, is that the *Bilski* majority—despite the invitation of several amici—refused to adopt categorical exclusions for software and business methods, thus reaffirming that portion of the *State Street* decision. See *Bilski*, supra, 545 F.3d at 960 & n.23.

As this article goes to press, a petition for certiorari has been granted by the Supreme Court. And while the Supreme Court grants reviews in less than three percent of the cases it is requested to hear, the conservative Roberts Court has decided five patent cases in the last two terms. All five cases resulted in reversals of the Federal Circuit and holdings that have diminished the power and scope of issued patents. See *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006); *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437 (2007); *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007); *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118 (2007); and *Quanta Computer, Inc. v. LG Elecs., Inc.*, 128 S. Ct. 2109 (2008). We shall see what happens with the sixth patent case in the Court’s next term.

Patent practitioners who favor the patentability of software- and business method-related inventions need to stay tuned. Those against such patent eligibility, however, have some hope. Why? Well, there are at least three reasons, depending on your position, for apprehension or hope:

- First, in *Bilski*, Chief Judge Michel himself acknowledged that “we recognize that the Supreme Court may ultimately decide to alter or perhaps even set aside this [machine-or-transformation] test.” *Id.* at 956;
- Second, in 2006, three justices of the Supreme Court dissented when the majority of the Court dismissed a writ of certiorari as improvidently granted (after oral arguments had been held) in a case involving the patentable subject matter eligibility of a medical diagnosis method. The dissenting Justices observed: “[Federal Circuit precedent] does say that a process is patentable

if it produces a ‘useful, concrete, and tangible result.’ But this Court has never made such a statement and, if taken literally, the statement would cover instances where this Court has held the contrary.” *Lab. Corp. of Am. Holdings v. Metabolite Labs.*, 548 U.S. 124, 136 (2006) (Breyer, J., dissenting) (citing *State Street*, 149 F.3d at 1373);

- Third, Judge Mayer’s dissent in *Bilski*, supra, 545 F.3d at 998: “The patent system is intended to protect and promote advances in science and technology, not ideas about how to structure commercial transactions. Claim 1 of the application of [Bilski] is not eligible for patent protection because it is directed to a method of conducting business. Affording patent protection to business methods lacks constitutional and statutory support, serves to hinder rather than promote innovation and usurps that which rightfully belongs in the public domain. *State Street* ... should be overruled.”

THE MUNIAUCTION DECISION • In its July 2008 *Muniauction* decision, the Federal Circuit tackled not patent subject matter eligibility, but the so-called joint infringement theory. Claim 1 of the patent-in-suit read as follows:

“In an electronic auction system including an issuer’s computer having a display and at least one bidder’s computer having an input device and a display, said bidder’s computer being located remotely from said issuer’s computer, said computers being coupled to at least one electronic network for communicating data messages between said computers, an electronic auctioning process for auctioning fixed income financial instruments comprising:

inputting data associated with at least one bid for at least one fixed income financial instrument into said bidder’s computer via said input device;

automatically computing at least one interest cost value based at least in part on said inputted data, said automatically computed interest cost value specifying a rate representing borrowing cost associated with said at least one fixed income financial instrument;

submitting said bid by transmitting at least some of said inputted data from said bidder’s computer over said at least one electronic network; and

communicating at least one message associated with said submitted bid to said issuer’s computer over said at least one electronic network and displaying, on said issuer’s computer display, information associated with said bid including said computed interest cost value,

wherein at least one of the inputting step, the automatically computing step, the submitting step, the communicating step and the displaying step is performed using a web browser.”

U.S. Patent No. 6,161,099 at col.14 l.41 – col. 15 l.2. The patentee-plaintiff did not dispute the contention made by the alleged infringer-defendant that no single party performed every step of claim 1. For example, the inputting step of claim 1 is completed by the bidder in the auction process, while a majority of the remaining steps are performed by the auctioneer’s (i.e., the defendant’s) system.

The Federal Circuit applied its rule that “where the actions of multiple parties combine to perform every step of a claimed method, the claim is directly infringed only if one party exercises ‘control or direction’ over the entire process such that every step is attributable to the controlling party, i.e., the ‘mastermind.’” *Id.* at 1329 (citing *BMC Resources, Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380-81 (Fed. Cir. 2007)). Thus, the issue in *Muniauction* was whether the defendant who operated the auctioning system exercised “control or direction” over its customers (i.e., the bidders) using the auction system.

In a somewhat harsh analysis leading to a harsh result, the *Muniauction* court reinforced its *BMC Resources* holding and reasoned that the “control or direction” inquiry does “not in any way rely on the relationship between the parties.” *Id.* at 1329-30 (citing *BMC Resources*, 498 F.3d at 1380). The court went on to observe:

“That [the auctioneer] controls access to its system and instructs bidders on its use is not sufficient to incur liability for direct infringement. ... Under *BMC Resources*, the control or direction standard is satisfied in situations where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party that are required to complete performance of a claimed method.”

Id. at 1330. The Federal Circuit then reversed the district court’s judgment on infringement because the patentee-plaintiff failed to identify any legal theory under which the defendant (i.e., the auction system operator) would be vicariously liable for the actions of its customers (i.e., the bidders using the auction system). Therefore, the defendant could not infringe the asserted claims as a matter of law.

Practitioners must take the *Muniauction* holding into consideration in conjunction with that of another case: *NTP, Inc. v. Research-in-Motion*, 418 F.3d 1282 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1157 (2006). *NTP* involved whether using, offering to sell, or selling of a patented invention is an infringement under 35 U.S.C. section 271(a) if a component or step of the patented invention is located or performed outside of the United States. With respect to system claims, the court held:

“The use of a claimed *system* under section 271(a) is the place at which the system as a whole is put into service, i.e., *the place where control of the system is exercised and beneficial use of the system obtained.* ... [C]us-

tomers located within the United States controlled the transmission of the originated information and also benefited from such an exchange of information. Thus, *the location of the Relay in Canada did not, as a matter of law, preclude infringement of the asserted system claims in this case.*”

Id. at 1317 (emphasis added). With respect to process claims, however, the court held:

“We therefore hold that *a process cannot be used “within” the United States as required by section 271(a) unless each of the steps is performed within this country.* In the present case, each of the asserted method claims ... recites a step that utilizes an ‘interface’ or ‘interface switch,’ which is only satisfied by the use of RIM’s Relay located in Canada. Therefore, as a matter of law, these claimed methods could not be infringed by use of RIM’s system.”

Id. at 1318 (emphasis added). In the current economic climate of outsourcing and offshoring, one can readily discern why *NTP* should be a concern to practitioners drafting business method-related claims. Further, with the emergence of the SaaS (“Software as a Service”) business model in the software industry, the combined holdings of *Muniauction* and *NTP* become more worrisome.

DRAFTING SOFTWARE AND BUSINESS METHOD CLAIMS

• In 1990, then Federal Circuit Chief Judge Giles Sutherland Rich—co-author of the modern patent laws and eventual author of the *State Street* decision—famously wrote “the name of the game is the claim.” *Extent of Protection and Interpretation of Claims—American Perspectives*, 21 Int’l Rev. Indus. Prop. & Copyright L. 497, 499 (1990). In essence, drafting claims is where patent practitioners earn their keep. After all, claims are infringed, not specifications (nor the drawings for that matter). Thus, given the current legal landscape, practitioners can only proceed

under the assumption that the claims at issue in *Bilski* and *Muniauction* serve as negative examples of claims draftsmanship (i.e., examples of how not to draft software and business method claims). So then, how should such claims be drafted? One can argue that, in the current legal landscape, software claims may be directed to something other than business methods, but all business method claims should be drafted as software claims. That is, it is clear that process claims directed to “pure” business methods of the type commonly seen in the insurance, securities trading, auction, incentive program, banking, and accounting fields will not meet the *Bilski* “machine-or-transformation” test. Rather, such claims should be crafted, if possible, as processes that meet the first prong of the *Bilski* test—one that “is tied to a particular machine or apparatus.” *Id.* at 954. Obviously, such machine or apparatus can easily be a computer system or subsystem thereof (e.g., a computer memory or a computer processor). Simply adding “computer-implemented” in the preamble of your business method and software process claims, however, is not enough. Proper claims draftsmanship requires additional thought with respect to the actors, the perspective of the claim, the “deep pockets” the claim seeks to cover, and the possibility that potential infringers may outsource or offshore certain tasks. Thus, an otherwise competently-drafted process claim may fall short if the additional thought items listed above are ignored. Consider the following hypothetical claim:

“A method for making a telephone call, comprising the steps of:

- (1) picking up the receiver of a first telephone;
- (2) dialing a number on said first telephone;
- (3) transmitting a signal to a second telephone, said second telephone being identified by said number;

- (4) causing said second telephone to ring;
- (5) picking up the receiver of said second telephone; and
- (6) talking.”

This otherwise (presumably) competently drafted claim falls short because it requires three actors for direct infringement—the calling party, the telephone company, and the called party!

As the *BMC Resources* court noted: “Direct infringement is a strict-liability offense, but it is limited to those who practice each and every element of the claimed invention.” 498 F.3d at 1381. In *BMC Resources*, the Federal Circuit cited Comment d of the *Restatement (Second) of Agency*, section 220 as providing some guidance as to how to show “control or direction” when multiple parties are needed to show (joint) infringement. *Id.* at 1379. Comment d cites examples of when the law imposes vicarious liability on a party for the acts of another in circumstances showing that the liable party controlled the conduct of the acting party. This is probably not the case in most business method-type inventions—like it was not the case in *Muniauction*.

How then does a practitioner avoid the harsh result of *Muniauction*? Well, the Federal Circuit has some advice: “The concerns over a party avoiding infringement by arms-length cooperation can usually be offset by proper claim drafting. A patentee can usually structure a claim to capture infringement by a single party. ... [T]his court will not unilaterally restructure the claim or the standards for joint infringement to remedy these ill-conceived claims.” *BMC Resources*, supra, 498 F.3d at 1381. Thus, a better attempt at drafting the above hypothetical claim is:

“A method for facilitating a telephone call between a first user and a second user, comprising the steps of:

- (1) causing a dial tone to be heard through the receiver of a first telephone used by the first user;
- (2) receiving an input from said first telephone, said input indicative of a number for a second telephone;
- (3) transmitting a signal to said second telephone causing said second telephone to ring; and
- (4) facilitating communications between the second user on said second telephone and the first user on said first telephone.”

Another type of claim that practitioners should have in their quivers is the computer program product claim—essentially software on a diskette—which falls under the “article of manufacture” category of Section 101 patentable subject matter. This type of claim is known as “Beauregard claims” after *In re Beauregard*, 53 F.3d 1583 (Fed. Cir. 1995) (Order vacating the appeal after the USPTO recognized “that computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. §101”); see also U.S. Patent No. 5,710,578 (the resulting patent). Such claims can typically be written in the form of:

“A computer program product comprising a computer usable medium having control logic

stored therein for causing a computer to [method claim preamble], the control logic comprising: first computer readable program code means for causing the computer to [first method claim step]; second computer readable program code means for causing the computer to [second method claim step];”

Beauregard claims have the added advantage of overcoming the *NTP* territorial limitations of process claims and may be more enforceable in situations where business processes are outsourced or offshored.

CONCLUSION • While we are living in an age of rapid technological advances, a “time of subatomic particles and terabytes,” *Bilski*, supra, 545 F.3d at 1011 (Rader, J. dissenting), our patent laws evolve and struggle to keep up with such advances. So too must practitioners’ vigilance in keeping up their drafting skills to adequately protect their clients’ inventions in the face of our evolving laws. This article hopes to aide in such vigilance. To that end, the following “checklist” is provided for practitioners to assure *Bilski/Muniauction/NTP* compliance.

***Bilski/Muniauction/NTP* Claims Checklist**

- ___ Which prong of the *Bilski* “machine-or-transformation” test is being relied upon?
- ___ Does each independent claim only cover one actor?
- ___ Is that one actor the “deep pocket” (e.g., have you only covered the consumer and not the service provider)?
- ___ If there are multiple potential “deep pockets,” have you written a set of claims covering each one?
- ___ Are the claims’ method steps capable of being performed outside the U.S.?
- ___ Should corresponding system claims be included to overcome the *NTP* offshoring limitations of method claims?
- ___ Are the system claims written from a perspective such that control of the system is exercised and beneficial use of the system is obtained in the United States?
- ___ Should *In re Beauregard* claims be included?
- ___ Has MPEP section 2106 (“Patent Subject Matter Eligibility”) been read lately for additional guidance?