

Administrative Patent Levers

By

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Introduction

Patent reform has once again been thrust into the center of national policy debates.¹ On March 8, 2011 The U.S. Senate approved a comprehensive bill to reform The Patent Act, and the House is scheduled to soon vote on similar legislation.² If enacted, this legislative overhaul would be the most significant patent reform achieved in sixty years.³ In prior years, the legislature introduced bills that similarly would have transformed patent law.⁴ These various bills, however, consistently failed due to the conflicting goals held by various industry constituents.⁵ That scenario was portrayed in the following manner by one legislator:

Whatever the fate of patent reform in the coming weeks, we can all agree that Congress has found it difficult to enact a truly comprehensive reform bill. Why? The answer is twofold. First, different versions of the legislation have addressed many core provisions of the Patent Act. And second, a number of different stakeholders use the patent system in different ways.⁶

The intricate dynamics of patent reform, however, extend far beyond the legislature. The judiciary, for example, stepped in over the years to fill the void created by legislative inertia and modified various substantive aspects of patent law.⁷ There is, however, a remaining element of patent reform that is vastly underappreciated. This largely ignored aspect of patent reform deals with the administrative rules created by the United States Patent and Trademark Office (USPTO) in its effort to manage a growing workload crisis.⁸ In particular, this article examines several administrative rules that the USPTO implemented to effectively manage a controversial category of patent applications falling within the category known as business methods. Part of the USPTO's workload crisis is attributed to the rapid increase in business methods, after the *State Street* decision opened the floodgates to these types of patents.⁹ This article describes how the USPTO enacted several unique administrative reforms to address business methods, following cues from important actors in the judicial, legislative and executive branches of government. The article also examines the legality of these rules, which are referred to as administrative patent levers, under established administrative law doctrine.¹⁰

Policymakers are keen to regulate patents since they are key economic resources in today's knowledge-based economy.¹¹ Companies patent what seem like an increasingly broad category of innovations, including what appear to be fundamental aspects of industry. Take the case of the online retailer Amazon.com, which patented its "one-click" shopping method¹² and later sued competitor Barnes and Noble for patent infringement.¹³ Amazon used the patent on their e-commerce shopping method to obtain an injunction and eventually a settlement from Barnes and Noble. In a similar case, Netflix patented its business model of renting items to shoppers online.¹⁴ Netflix eventually used this patent to sue its competitor Blockbuster when it offered a competing online movie rental service. That case was also settled, with terms believed to be favorable to Netflix.¹⁵ In both cases, business method patents were at the heart of competitive battles between emergent online retailers and what had been dominant brick-and-mortar incumbents.¹⁶

Yet, the legal validity of many business method patents remains questionable since they sometimes extend to subject matter that appears to be generally known, or are obvious in light of the prior art.¹⁷ For example, in the Amazon case mentioned above, Amazon's one-click patent was subsequently re-examined by the United States Patent and Trademark Office (USPTO). After its re-examination, the USPTO rejected claims 1-5 and 11-26 of Amazon's patent as improperly granted.¹⁸ According to scholars, a significant portion of business method patents are of suspect validity since the examiners at the USPTO lacked the experience necessary to properly evaluate many of the claims granted in these patents. Likewise, a good deal of controversy surrounds business method patents since they may be used to stifle competition in rapidly evolving areas of business, such as e-commerce. Commentators also point out that business method patents may wreak havoc if they fall into the wrong hands. Several prominent cases are highlighted where business method patents are aggressively wielded by patent trolls, or non-practicing entities whose sole objective is to sue large companies, and threaten a hold-up by obtaining an injunction.¹⁹

The effects of business method patents were amplified due to the broader trend towards stronger and broader patent rights.²⁰ This trend was propelled by the creation of the Court of Appeals for the Federal Circuit (CAFC), a special jurisdiction court that decides patent appeals.²¹ To strengthen patent rights, the CAFC promulgated what has been described as a formalistic patent jurisprudence that emphasized clearly defined tests and rules. To some commentators, this pro-patentee shift presented significant

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risks since patent owners, and particularly patent trolls, were empowered under these rules to hinder innovation through hold-ups and other extortionist tactics.²²

Despite persistent calls for legal reform, the legislative stalemate mentioned earlier left open the opportunity for business method patent abuse. Significant steps were taken, however, to limit the scope and strength of business method patents through the use of judicial common law patent levers.²³ In recent years, the Supreme Court has reviewed important patent doctrines related to injunctive relief²⁴, the non-obviousness standard²⁵, and business method patentability.²⁶ As a general matter, the Supreme Court's patent jurisprudence has rejected the CAFC's formalistic jurisprudence in favor of a more flexible and context-based approach.²⁷

This article addresses how the USPTO enacted a complementary set of norms and rules to specifically restrict business method patents, which are viewed as a particularly *suspect* category of patents.²⁸ This article maintains that the adoption of administrative patent levers at the USPTO goes hand in hand with the judicial, legislative and executive branches' coordinated and *sui generis* apprehension towards business method patents. The Supreme Court considerably reformed patent law through the use of its judicial patent levers.²⁹ There remained significant room, however, for the USPTO to compensate for any policy vacuums that lingered via its administrative rulemaking function, particularly due to significant political and institutional pressures emanating from the legislature and the executive branch.³⁰ While a great deal of attention has been devoted to *why* certain policies and rule-making practices at the USPTO are either good or bad³¹, hardly any attention has been devoted to examine *how* these rules and policies were instituted and legitimized within the larger institutional backdrop of government. Also, there has yet to be a full appreciation of the coordinating role that the USPTO's administrative patent levers played as a compliment to legislative and judicial patent reform goals. As a consequence, the process through which these administrative patent levers emerged has, to date, received scant consideration.

The implementation of business method-related administrative patent levers can be explained through the lens of institutional theory and the principal-agent theory of administrative decision-making. Institutional theory examines the influence that institutions have on legal doctrine and outcomes.³² From this perspective, the institutions that influenced the creation of administrative patent levers at the USPTO include stakeholder advocacy manifested on the record in: legislative bills, roundtable discussions, hearings and policy statements. As proposed in this article, the rather extraordinary *sui generis* treatment of business methods across *all* branches of government helps to explain why the USPTO adopted special business method patent norms and rule-making, to a degree not seen in other emergent and important technology areas such as nanotechnology, software or biotechnology.

The article proceeds as follows. Section II briefly introduces the history and conceptual foundation of business method patents. Section III surveys the academic literature to expose the costs imposed by these patents on innovators and society. Section IV examines how the judicial, legislative and executive branches of government reacted to the social costs borne from these patents. Section V analyzes the USPTO's reaction to these various institutional and public policy reactions. This section discusses five administrative patent levers that the USPTO developed in response to this external institutional pressure, and the effect that these measures have taken on business method patenting overall. Section VI discusses the administrative law implications raised by the USPTO's use of these particular levers, and addresses their legality. All of the patent levers are determined to be within the USPTO's administrative authority. Part VII concludes.

I. Business Method Patents

One of the most contentious issues surrounding business method patents concerns whether in fact they can be conceptually defined. From a statutory perspective, the U.S. Patent Act initially failed to provide guidance other than suggesting that business methods fell under the allowed general category of "processes", subject to general and well established exceptions.³³ In response to the perceived dangers of business methods, The Patent Act was amended to provide a prior use defense related to methods of "doing or conducting business". This amendment, however, failed to clearly define method of conducting business.

In 2001, a bill was introduced called The Business Method Patent Improvement Act that would have raised the obviousness standard for business methods.³⁴ This bill defined business methods as:

- (1) a method of processing data; or performing calculation operations; and which is uniquely designed for or utilized in the practice, administration, or management of an enterprise; (2) any technique used in athletics, instruction, or personal skills; and (3) any computer-assisted implementation of a method described in paragraph (1) or a technique described in paragraph³⁵

The bill was not enacted, therefore, the definition lacks any statutory authority.

The judiciary has referred to business methods without precisely articulating the contours of this technology class. The earliest case cited for the proposition that business methods remained beyond patentability is *Hotel Security Checking Co. v. Lorraine Co.*³⁶ In that case, the Court held that patent claims for a bookkeeping system were unpatentable *per se*. A series of subsequent cases

reinforced the presumption that a “business method exception” existed that excluded business methods from being patentable.³⁷ The eventual advent of information technology, however, challenged the *per se* rule against patents covering data processing.³⁸ In 1981, The Supreme Court relaxed its rule against software patents in *Diamond v. Diehr*.³⁹ In that case, the Court held that an algorithm may be patentable as a process if it claims a “useful, concrete and tangible result.”⁴⁰

The formal legal status of business methods, as opposed to software algorithms, was later clarified when the CAFC decided the *State Street* case.⁴¹ In that seminal case, the CAFC dismissed the business method exception altogether, holding that a software algorithm for processing data in a system was patentable. Under the Court’s reasoning, the algorithm created a “useful, concrete and tangible result” that may be patentable even if the result is something as non-physical as an investment value.⁴² Ultimately, the CAFC mentioned that the business method exception was incompatible with the Court’s interpretation of the Patent Act, and that any rejections of business methods in the past had been based on statutory issues such as novelty, not on the membership of a class pertaining to business methods.⁴³

State Street begs the question, as some commentators have pointed out, whether the definition of a business method patent can ever be grounded in principle.⁴⁴ Some commentators argue, for example, that business methods precede the modern understanding of these processes, since inventors have patented methods that have pertained to business processes as far back as 1889.⁴⁵ Other commentators point out that they need not even be drafted as methods, and that despite any regulation patent drafters routinely craft claims that reflect business methods as elements of an apparatus.⁴⁶

More recently, the Supreme Court decided the *Bilski* case and conclusively resolved the issue of whether business methods are patentable subject matter.⁴⁷ In their opinion, the Court stated that:

Section 101 similarly precludes the broad contention that the term “process” categorically excludes business methods. The term “method,” which is within §100(b)’s definition of “process,” at least as a textual matter and before consulting other limitations in the Patent Act and this Court’s precedents, may include at least some methods of doing business.⁴⁸

The *Bilski* Court, however, continued the tradition held within the judiciary to refrain from clearly defining the contours of what are referred to as business method patents.

A working definition of business methods has been developed by the USPTO, the agency responsible for granting or denying this, and all other categories of patents. The way the USPTO defines business methods relates to its detailed and dynamic technology classification system, which matches a broad business method definition offered by Professor Spulber. Business method patents are defined by Professor Spulber in his work as: “the discovery of a commercial technique for firms to address market opportunities, such as a transaction procedure, market microstructure, financial system, operational process, or organizational form.”⁴⁹ The USPTO mainly identifies business method patents primarily through its class 705: “Data Processing, Financial, Business Practice, Management, or Cost/Price Determination”, in addition to twenty eight other classes that might apply to this category of patents.

Given the overall lack of definitional precision, it is unsurprising that these patents are applied in a broad variety of industries. For example, business method patents have been asserted in cases involving financial products⁵⁰, insurance products⁵¹, tax methods⁵² and perhaps most notably e-commerce.⁵³ It is not a coincidence, however, that business method patents have become a salient issue as online business transactions flourished. The rapid emergence of online business transactions amplified the market power of business method patent owners, who increasingly and aggressively asserted methods related to electronic means of conducting business. The *State Street* decision is said to have opened “the floodgates” to business method patenting and litigation.⁵⁴ One source reports that the year before the *State Street* case was decided, the USPTO received 1,300 business method applications.⁵⁵ The year following the *State Street* case, the USPTO received 7,800 business method applications.⁵⁶

II. The Social Costs of Business Method Patents

Patent owners possess what are known as negative rights, or the right to exclude others from making, using or selling a claimed invention. As technologies become increasingly cumulative⁵⁷ and distributed⁵⁸ patents raise considerable transaction costs if they are used to block technological progress or implementation.⁵⁹ As recognized in the literature, there are several tactics employed by patent owners that disadvantage competitors⁶⁰ and impose social costs in the process. For example, a company can patent a rival technology for the sole purpose of preventing others from practicing the invention.⁶¹ A superior and socially beneficial competing technology may, therefore, never be applied due to these *blocking* patents.⁶² A patentee may also engage in evergreening, or patenting an incremental aspect of a preexisting technology to unduly extend the monopoly lifetime of the underlying technology.⁶³ Another tactic patentees may use is to engage in strategic filing practices, such as abusing the continuation procedure.⁶⁴ Lastly, patent owners may forum shop by filing patent lawsuits in any of the pro-plaintiff “rocket docket” jurisdictions.⁶⁵ In addition to these general

strategies, there are two strategies that are particularly relevant to business method patents and that impose social costs when undertaken. Those two strategies include patenting overly broad claims, and using a patent to extract an unusually large settlement.

A. Patenting Overly Broad Claims

Business method patents are often criticized for being unduly broad. There are a few things to consider regarding this criticism. First, a patent is unduly broad if it improperly claims technology that was disclosed or practiced in the prior art, or was obvious to one with ordinary skill in the art. Business methods are often criticized as unduly appropriating technology that had been previously practiced, or as lacking innovative merit. This criticism has some support due to the fact that many business methods were previously practiced and used in commerce, yet, remained hidden from USPTO examiners.⁶⁶

For example, in the case of *American Stock Exchange, LLC v. Mopex, Inc.*, a non-practicing entity sued the American Stock Exchange (AMEX) for infringing a business method patent related to a financial product known as an exchange traded fund or “ETF”. The USPTO granted Mopex a patent for this financial product on July 11, 2000.⁶⁷ The AMEX sued in court to invalidate the patent based on the fact that the financial product had been practiced and disclosed in prior art that USPTO examiners failed to review. At trial, the AMEX submitted evidence that this type of ETF had been developed, traded and disclosed by Morgan Stanley. The court considered evidence that in 1994 Morgan Stanley had submitted a publicly available application for an ETF with the Securities and Exchange Commission. This prior art was then used to invalidate Mopex’s business method patent.

Business method patents proliferated as online business transactions became ubiquitous. A common attack on these patents is that the patent examiners handling these applications did not have sufficient training in the emergent fields of Internet commerce where business methods were being claimed. A closely related argument is that examiners did not have sufficiently updated non-patent literature databases with industry-relevant prior art that would enable the examiner to narrow or reject business method patent claims.⁶⁸ Patent examiners are also notoriously pressed for time, given the increasing patent backlog at the USPTO.⁶⁹ As a result of these constraints, it is widely believed that many overly broad business method patents were issued.

B. Using Business Method Patents to Extract a Large Settlement

The social costs of overly broad business method patents are amplified when they fall into the hands of the so called patent trolls, or non-practicing entities (NPEs).⁷⁰ A NPE is a party who owns a patent, does not practice the underlying technology, and uses the patent to sue large companies to obtain a settlement or a verdict. According to one source, there were more than 2,600 instances in 2010 where a company was the litigation target of a NPE. According to this source, this represents a 48% increase over the average amount of the prior three years.⁷¹ According to the registration statement recently filed with the SEC by a company involved in assembling defensive patent portfolios to protect companies from NPE’s, “there were over 550 patent infringement cases filed by NPEs in 2010 against more than 3,000 defendants, which comprised over 2,000 unique companies, some of which were sued more than once.”⁷²

The NPE exploits the fact that it is a small company with no real presence in the market and that cannot be counter sued for infringing any of the larger company’s patents.⁷³ Often, when one large company sues another large company (usually a competitor) for patent infringement, the competitor countersues and likewise alleges patent infringement. Often, the result is a negotiated cross-license and technology sharing agreement.⁷⁴ A large company does not have this option when it is the target of a patent lawsuit initiated by a NPE.

Compounding the problem is that the NPE will often enforce a business method patent against a large company operating in a complex, or cumulative technology area.⁷⁵ This places a great deal of pressure on the defendant since they may be forced to expend considerable resources to design around the patent, or may face a complete shut-down if the NPE obtains an injunction.⁷⁶ This creates the risk that the NPE will engage in a strategic hold-up⁷⁷ and extort an unreasonably large settlement or verdict. For example, the NPE Eolas obtained \$521 million when it obtained a patent injunction against Microsoft.⁷⁸ NTP, Inc., another NPE, notoriously obtained \$612.5 million when it threatened to enforce a permanent patent injunction against Research-In-Motion, makers of the “Blackberry” handheld device.⁷⁹

A vocal consensus has emerged that criticizes the poor quality of business methods and their harmful consequences.⁸⁰ In an empirical study, however, Professors Allison and Tiller counter the assertion that business method patents are of below average quality.⁸¹ In their empirical study, they assess business method patents using well established quality measures and find that there is no basis for claiming that business method patents are inferior in terms of the number of prior art references, claims and inventors.⁸² Professor’s Allison and Tiller attribute the high levels of public discord regarding business method patents to an information “bandwagon” effect whereby people judged business methods based on the comments of experts, with negative views reinforced by a confirmation bias based on widespread public discussions of egregious examples of abuse such as Amazon’s “one-click” patent.⁸³ These authors’ assessment is supported by the way the media portrays business method patents in a generally negative light.⁸⁴

III. Institutional Reactions to Business Methods across all Three Branches of Government

The significant bad press and attention drawn from cases involving overly broad business method patents and NPEs aggressively wielding them triggered a wave of public scrutiny.⁸⁵ Public policymakers, in turn, responded as vocal and influential patent law stakeholders voiced the alarm. Policymakers operate through public institutions, which provide a forum to assemble information and bring stakeholders together. In the patent arena, there is a diverse, active and vocal group of stakeholders continually vying to shape patent law and policy. A recent study found that 191 separate for-profit corporations filed *amicus* briefs in sixteen Supreme Court patent cases.⁸⁶ A similar study by Professor Colleen Chien found that in the past 20 years of patent *amicus* brief advocacy, more than 1,500 *amici*, representing thousands of organizations, companies, and individuals have signed onto briefs in hundreds of patent law cases.⁸⁷

Policymakers' institutional reactions to interest groups are evident in all three branches of government, which to varying degrees respond to interest group advocacy.⁸⁸ Policymakers, however, often do not initiate regulatory oversight unless interest groups first voice the alarm.⁸⁹ The alarm and call for regulatory reform is then delegated to administrative agencies such as the USPTO under what has been called the fire-alarm model of regulatory oversight.⁹⁰ If policymakers respond to interest group pressure, it is expected that administrative agencies will respond to policymakers' concerns under the principal-agent theory of decision making.⁹¹ From this perspective, elected policymakers exercise considerable discretion over administrative rulemaking and direction, given their ability to enact legislation, approve staffing, engage in general oversight and control an agency's appropriations.⁹² As with various other agencies, Congress is generally the ultimate decision-maker with respect to the USPTO's budgets and appointments. Congress also conducts oversight and investigations, and engages in casework on behalf of constituents.⁹³

As will be discussed next, the judicial, legislative and executive branches all coordinated a spirited public debate concerning business method patents. This interest in business methods was manifested through: judicial patent levers, hearings, proposed legislation, roundtable discussions and policy papers. The argument advanced here is that these different institutional mechanisms provided a clear expression to how seriously policymakers considered the alarm raised by constituents. The various institutional mechanisms that signaled the alarm with respect to business methods are discussed next.

A. The Judiciary

In several instances the judiciary echoed the alarm concerning the harmful effects of business methods. This alarm, in turn, influenced the USPTO's administrative decision-making since the agency's rules are guided by the Courts' statutory interpretations. In particular, two recent Supreme Court cases shed some light on how the high court has reacted to business methods. In *eBay v. MercExchange*, the NPE MercExchange sought to obtain a permanent injunction against eBay after successfully asserting a business method patent against the online retailer.⁹⁴ The legal doctrine at issue in that case applied to patents in general since the decision reframed the test for awarding a permanent patent injunction as one involving the traditional four-factor test for equitable remedies. Justice Kennedy wrote a concurring opinion with three other justices, however, that specifically addressed the alarm over business methods. Justice Kennedy wrote:

In addition injunctive relief may have different consequences for the burgeoning number of patents over business methods, which were not of much economic and legal significance in earlier times. The potential vagueness and suspect validity of some of these patents may affect the calculus under the four-factor test.⁹⁵

In *Bilski v. Kappos*, the Court ultimately held business methods may be patentable subject matter. Justice Kennedy, again speaking for the Court, reiterated the particular dangers raised by business methods, by stating:

At the same time, some business method patents raise special problems in terms of vagueness and suspect validity. See *eBay Inc. v. MercExchange, L. L. C.*, 547 U. S. 388, 397 (2006)(KENNEDY, J., concurring). The Information Age empowers people with new capacities to perform statistical analyses and mathematical calculations with a speed and sophistication that enable the design of protocols for more efficient performance of a vast number of business tasks. If a high enough bar is not set when considering patent applications of this sort, patent examiners and courts could be flooded with claims that would put a chill on creative endeavor and dynamic change.⁹⁶

B. The Legislature

The warning bell for business methods perhaps rang loudest during the early years of the Internet (1999) when Amazon.com threatened to assert its "one-click" e-commerce patent against other online competitors.⁹⁷ When this occurred, companies began to appreciate the threatening nature of business methods and began sounding the alarm to elected representatives. In return, legislators conducted hearings to demonstrate responsiveness to constituent demands. Hearings also send a signal to institutional actors in the

other branches of government. As a federal matter, issues related to patents are initially heard in the House Subcommittee on Intellectual Property, Competition, and the Internet and in the Senate Committee on Judiciary.

The House and the Senate periodically hold hearings related to patent law and administration. Since 1995, the House has held 38 separate hearings on items related to patents.⁹⁸ The Senate, in turn has held 8 separate patent-related hearings since that date.⁹⁹ These hearings at times deal with items specific to certain industries, such as biotechnology, general oversight hearings on USPTO appropriations and administration, and legislative proposals for patent reform.

The first recorded discussion of business method patents in the legislature occurred on March 25, 1999 when the House held an oversight hearing on patent reform. Since then, the transcripts of the various hearings reflect a mention of business methods 20 times in House and 2 times in Senate hearings.¹⁰⁰ Often, the issue of business methods was raised as a factor related to the decline of patent quality indicators due to the difficulties patent examiners faced when searching business method-related prior art. One measure used to assess the elusive concept of patent quality are the rates in which patent applications are re-examined or declared invalid in court.¹⁰¹ Scant evidence, however, was discussed in the legislative hearing that applies any empirical data on these metrics to business methods.¹⁰²

Hand in hand with these hearings, the Legislature introduced bills to address this issue. The first instance of legislation targeting business methods was The American Inventors Protection Act of 1999. This legislation modified the Patent Act to provide what is called the first user defense against business methods. The Act provides a defense to a charge of infringement of a patent on a “method of doing or conducting business” if the accused infringer in good faith reduced the method to practice at least one year before the patent was filed, and commercialized the method in the U.S. any time before the patent filing date.¹⁰³ This legislation was passed in response to the alarm raised by what was perceived as the low quality of business method patents.

Additional proposals to target business methods were found in The Business Methods Improvement Act of 2001.¹⁰⁴ This Act was introduced to address concerns in the Legislature that the patenting of abstract ideas and weak patents were crippling innovation.¹⁰⁵ The Act would have exclusively targeted the obviousness standards related to business methods by requiring that:

A business method invention shall be presumed obvious under this section if the only significant difference between the combined teachings of the prior art and the claimed invention is that the claimed invention is appropriate for use with a computer technology, unless the application of the computer technology is novel; or the computer technology is novel and not the subject of another patent or patent application...¹⁰⁶

The intended effect of this language would be to prevent applicants from receiving business method patents for innovations that were novel simply because they were implemented with a computer.

C. The Executive Branch

Various agencies within the Executive branch of government raised the alarm concerning business methods. The first and most obvious agency to look for alarm signals is the USPTO. In March 2000, in response to the alarm over business methods, the USPTO launched a Business Method Patent Initiative, which included industry outreach and quality programs.¹⁰⁷ The industry outreach included a series of roundtable meetings with stakeholders on issues related to business methods. At the first roundtable, a topic for consideration was whether computer-implemented business method patents encouraged or curbed growth in innovation?¹⁰⁸ Since March, 2000 the USPTO has held yearly business method patent roundtables to discuss topics related to business methods.

Roundtables on business methods have also been conducted by the U.S. Federal Reserve Banks of Chicago and Atlanta. For example, in April 2003 the Federal Reserve Bank of Atlanta invited academics and practitioners to discuss the effects of business method patents on the financial services industry. The conference announcement posed the following questions for consideration:

What are the implications of these developments for the evolution and structure of the financial services industry? How will they affect business strategy? Will the granting of business methods patents stifle product and service innovation or will it promote a vibrant industry? How has the U.S. Patent Office approached the questions of whether certain business methods are or are not eligible for patent protection?¹⁰⁹

In addition to hearings and roundtables, various departments within the Executive branch issued policy papers that highlight the dangers of business methods. For example, in July, 2009 The USPTO prepared a Business Methods White Paper that mentions some of the unique challenges related to examining business methods. The USPTO white paper states that:

Patent examining in Class 705 is filled with challenges. This class contains diverse business topics (e.g. insurance and inventory systems). Prior art references can be found in many diverse sources (e.g. an Internet web site, a sales brochure, or a 120-year-old textbook). There is poor tabulation of all the available references for a particular topic (e.g. not all the insurance prior art is found in one location).¹¹⁰

The Federal Trade Commission is another prominent administrative body that has been critical of business methods. In October, 2003 The FTC published a report that has been cited by top policymakers, including the U.S. Supreme Court and legislators. In the report, “To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy”, the FTC praised the USPTO’s use of additional levels of review for business methods, reiterated the view that business methods had traditionally been exempted from patentability,¹¹¹ and discussed the difficulty locating adequate business method prior art.¹¹²

In 2004, The National Academy of Science published a comprehensive analysis of the patent system called “A Patent System for the 21st Century”. In that report, the Academy stated how it is “concerned about trends in the application of the obviousness standard to business method and genetic sequence inventions.”¹¹³ They also responded to Allison and Tiller’s¹¹⁴ work which suggested that business method quality indicators failed to show any cause for alarm. In response to that work, they questioned whether: “[t]he body of nonpatented prior art in the area of business methods is so large or diverse that examiners are still missing a good share of it? Does the examination process overlook some business methods that are in common use but not documented in written sources?”¹¹⁵

This section has provided evidence of the various fire alarm mechanisms raised within all three branches of government. As will be discussed next, this institutional response generated tangible administrative outcomes within the USPTO. This process, involving norms and rule-making, exemplifies how business methods are in many ways unique, since they received a significant amount of specialized attention by these various actors.¹¹⁶ Such particularized and coordinated interest across all three branches of government is extraordinary in issues related to patent law. The process highlights how an administrative agency may at times be influenced through external institutional reactions under the fire alarm model of regulatory change.

IV. The USPTO’s Response to the Fire Alarm: Administrative Patent Levers

The USPTO promptly developed rules to address the concern over business methods. In particular, the USPTO implemented rules to address the issue of patent quality related to this technology class, given the concerns voiced regarding unduly broad business method patents. On March 29, 2000, the USPTO announced the business method patent initiative, which includes industry outreach and quality programs.¹¹⁷ The industry outreach programs establish a customer partnership with industry, the convening of a roundtable forum, and an effort to obtain industry feedback on prior art issues.¹¹⁸ The quality programs provide steps to enhance the technical training of examiners, revise the examination guidelines and expand prior art search activities.¹¹⁹

Five business method-specific rules will be discussed next. A remarkable aspect of these rules is that, as administrative patent levers, they target a specific item of patent reform applied within the context of a particular technology class.¹²⁰ This exercise of administrative policy is remarkable since the Patent Act is silent regarding any *sui generis* treatment of technology classes. Yet, under the general guise of enhancing patent quality, the following administrative rules were implemented to specifically deal with business methods. The end goal of improving patent quality, however, provides the USPTO with the legitimacy to enact regulations that attain the objective of issuing patents that meet statutory criteria.¹²¹

The first three administrative patent levers relate to rules pertaining to examination procedures, the last two relate to partnerships with external parties

1. New Examiner Category

In its Business Methods White Paper, the USPTO described a new category of experts specifically retained to help examiners evaluate business method patent applications. These additional experts are called Business Practice Specialists. According to the USPTO, these specialists: “will be pursued from industry to serve as a resource for examiners on common or well known industry practices, terminology, scope and meaning, and industry standards in four basic areas: banking/finance, general e-commerce, insurance, and Internet infrastructure.”¹²² These experts will assist with training efforts to help examiners stay abreast of the latest developments in the various business method-related fields of art.

2. Mandatory Field Searching.

Examiners evaluating business methods are required under the new rules to search an exhaustive list of patent and non-patent literature to adequately assess the prior art. Under these rules, “examiners perform a mandatory search for all applications in Class 705 to include a classified U.S. patent document search, and a text search of U.S. patent documents, foreign patent documents, and non-patent literature (NPL). The NPL searches include required search areas mapped/correlated to the U.S. classification system for Class

705. Included in the list of mandatory references are the following databases, in addition to special topics databases. It is noteworthy that mandatory field searches that are this comprehensive have never been required before for a particular technology class.

3. “Second Pair of Eyes” Review In March 2000,
the USPTO established the “second pair of eyes” review for business method patents in Class 705.¹²³ As described by the USPTO: “[i]t is a ‘universal’ review of all allowances in Class 705 with each allowance taking about one hour. The purpose of this review is for the reviewer to quickly flag issues that need further consideration by the examiner and/or the examiner’s supervisor. The results of the “second pair of eyes” reviews are used to develop training in Class 705.” Similarly, the second pair of eyes review is a novel procedure that had never been implemented before during patent examination.

4. Coordination with External Parties to Improve Search Capabilities Perhaps the most
unique rulemaking adopted in reaction to the fire alarms concerning business methods include the outreach efforts with external parties. A new rule developed by the USPTO seeks input from external parties to augment its non-patent literature (NPL) prior art databases. The following are two separate statements made by two high ranking Patent Office officials during congressional testimony:

“[W]e continue working with private parties to expand examiners’ access to non-patent literature. For example, last year we held hearings in San Francisco and here in Washington on this very matter. I am pleased that, as a result of these efforts, organizations such as the Securities Industry Association have come forward to help our office expand access to state of the art information in their areas.”¹²⁴

“As part of our on-going Business Methods Patent Initiative, since August 2000 we have tripled the number of customer partnerships (from 10 to 31) with the patent community and the software, Internet and electronic commerce industries.”¹²⁵

This level of coordination with external parties to expand the level of prior art knowledge is in many ways singular to the business methods technology class.

5. Peer-to-patent

The peer-to-patent project was an effort undertaken by the USPTO in June 2007 to open up the application review process to external reviewers who may submit relevant prior art to an examiner.¹²⁶ Originally, this limited pilot project was undertaken to examine software patents, but shortly after its announcement business methods were added to its scope.¹²⁷ As stated by the USPTO: “This pilot will test whether such collaboration can effectively locate prior art that might not otherwise be located by the Office during the typical examination process.”¹²⁸

The project has been conducted on a purely voluntary basis, with patent applicants choosing to opt into the peer-to-patent review process. In exchange for volunteering, the applicant would receive an expedited review process and in theory a more robust examination that might yield a higher quality issued patent. Although the USPTO participated in the project, it was conducted in collaboration with the Community Patent Review Project of the Institute for Information Law and Policy at New York Law School. The USPTO, however, took effort to state its independence from the project in a disclaimer.¹²⁹

In the second anniversary report of the peer-to-patent project, it was stated that a total of 187 patent applications had been reviewed as of May 2009.¹³⁰ The USPTO has deemed the initial two year pilot program a success and agreed to continue the project. The extended period for receiving peer-to-patent submissions into accepted applications will now end on February 3, 2012, or eighteen (18) weeks after the latest date on which an application is accepted into the program, whichever occurs last.¹³¹ This new program will also be expanded to include “Life Sciences, Telecommunications, and Computer Hardware, and by significantly increasing the total number of applications that may be accepted into the pilot.”¹³²

V. Administrative Law Implications

Administrative business method patent levers represent a coordinated policy at the USPTO to target a particular technology class with the goals of improving patent quality during the examination phase. As an administrative agency, the USPTO routinely enacts rules to further its statutorily delegated responsibilities. Recent rules have been promulgated to deal with the backlog of patent applications, for example, rules related to patent continuations.¹³³ Unlike other agencies, however, the USPTO lacks substantive rulemaking authority. The CAFC stated: “As we have previously held, the broadest of the PTO’s rulemaking powers-- 35 U.S.C. § 6(a)--authorizes the Commissioner to promulgate regulations directed only to “the conduct of proceedings in the [PTO]”; it does not grant the Commissioner the authority to issue substantive rules.”¹³⁴

Section 6(a) referred to by the CAFC in the *Merck* case was the predecessor to Section 2(b)2 of the current Patent Act. Section 2(b)2 gives the USPTO the authority to:

establish regulations, not inconsistent with law, which . . . (A) shall govern the conduct of proceedings in the office; . . . (C) shall facilitate and expedite the processing of patent applications, particularly those which can be filed, stored, processed, searched, and retrieved electronically . . . (D) may govern the recognition and conduct of agents, attorneys, or other persons representing applicants or other parties before the Office . . .¹³⁵

Given this statutory provision, the Courts have consistently held that the USPTO lacks the administrative authority to implement substantive rules. A rule is "substantive" when it "effects a change in existing law or policy" which "affects individual rights and obligations." To be "substantive", a rule must also be promulgated pursuant "to statutory authority . . . and implement the statute."¹³⁶ The CAFC has endorsed the D.C. Circuit's view that substantive rulemaking "encodes a substantive value judgment or puts a stamp of approval or disapproval on a given type of behavior."¹³⁷ As scholars and the courts recognize, however, procedural rules at times combine elements of procedure and substance.¹³⁸ As stated by Professor Arti Rai, "substance and procedure exist on a spectrum."¹³⁹

In the recent *Tafas* case, the CAFC determined the framework for determining whether rules implemented by the USPTO went beyond the USPTO's delegated authority under 35 U.S.C §2(b)2. The Court in *Tafas* took a broad view towards USPTO rulemaking and authority.¹⁴⁰ Yet, even under *Tafas*, any rules implemented by the USPTO must be initially evaluated under a procedural vs. substantive framework.¹⁴¹ Under the Patent Act, substantive rules are beyond the USPTO's authority and therefore unlawful. Procedural rules that have substantive implications may be lawful so long as they do not contravene the Patent Act, or existing judicial patent doctrine.¹⁴² Under *Tafas*, however, any challenges to rules that are deemed procedural are analyzed applying the established *Chevron* deference to rulemaking.¹⁴³ When the court applies the *Chevron* deference, the Court frames the administrative authority issue in the following manner: "[I]f the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute."¹⁴⁴

Under this framework, it is important to ask whether any of the rules implemented by the USPTO concerning business methods, implemented in response to the institutional fire alarms, are lawfully implemented under § 2(b)2 of the Patent Act. The initial inquiry should focus on the text of the Patent Act and the *Tafas* framework to determine whether the business method-related rules are substantive or procedural in nature. A strong argument can be made that the three examination rules¹⁴⁵ are procedural, given that they primarily relate to regulations that govern examination "proceedings in the office."¹⁴⁶ Likewise, the fourth rule related to partnership with external parties, the rule on industry partnerships to expand non-patent prior art databases, is also likely a procedural rule since it is targeted primarily at the examination proceedings in the office with respect to non-patent literature prior art.¹⁴⁷ Given the *Chevron* deference that would apply to the first four procedural rules, a reviewing court would likely hold that the Patent Act is silent or ambiguous regarding these procedures, and that the rules are based on a permissible construction of the statute.

The final rule on peer-to-patent appears to be more problematic since it requires the applicant to waive 37 C.F.R. 1.99(d), which requires that a third party's prior art "submission under this section shall not include any explanation of the patents or publications, or any other information."¹⁴⁸ Peer-to-patent would likely be upheld, however, since the USPTO asserts its authority to enact peer-to-patent under 35 U.S.C. § 2(b)(11). That provision provides that the USPTO "may conduct programs, studies, or exchanges of items or services regarding domestic and international intellectual property law and the effectiveness of intellectual property protection domestically and throughout the world," and 15 U.S.C. § 1525, which provides that the USPTO "may engage in joint projects, or perform services, on matters of mutual interest, the cost of which shall be apportioned equitably."¹⁴⁹

Having established authority to engage in peer-to-patent from the statute, the next step would be to apply *Chevron* deference to the rules implementing this program. From the outset, it appears that the peer-to-patent program complies with the provisions of Patent Act concerning third party objections and submissions of prior art. 35 U.S.C. §122 (c) states:

The Director shall establish appropriate procedures to ensure that no protest or other form of pre-issuance opposition to the grant of a patent on an application may be initiated after publication of the application without the express written consent of the applicant.

In fact, the USPTO only accepts volunteers to participate in this limited pilot program. Further, consent is required from volunteers who participate.¹⁵⁰ The consent form requires the applicant to allow third parties to submit prior art references that detail the basis of opposition to the application.¹⁵¹

Although all of the business method patent levers may, on their face, be procedurally valid and subject to *Chevron* deference, there is still the possibility that they substantively deprive patent applicants of their rights. For instance, the court in *Tafas* adopted the D.C. Circuit's test for assessing permissible procedural rulemaking as elaborated in *JEM*. Under that analysis, an acceptable procedural rule may "alter the manner in which the parties present themselves or their viewpoints to the agency." In *Tafas*, the Court upheld this principle to patent continuation rules by stating that the challenged rules were procedural since they may "alter the manner

in which the parties present . . . their viewpoints" to the USPTO, but they do not, on their face, "foreclose effective opportunity" to present patent applications for examination."¹⁵² Later in the opinion, the Court also stated that:

While the text of the rules sets forth a facially reasonable procedural requirement,⁵ we are mindful of the possibility that the USPTO may in some cases attempt to apply the rules in a way that makes compliance essentially impossible and substantively deprives applicants of their rights. In such cases, judicial review will be available under 5 U.S.C. § 706.¹⁵³

If the business method patent levers were found to "foreclose effective opportunity" for business method applicants to obtain substantive patent rights, the rules might be challenged. To the extent that these rules might foreclose effective opportunity" to obtain substantive patent rights, the principal issue that may conceivably present a challenge is the long pendency rates that plague this technology class. One practitioner states that the acting Commissioner of Patents stated that the backlog for business methods is ten years.¹⁵⁴ In essence, it takes the average business method patent ten years to issue. This means that the statutory lifetime of the patent is cut in half due to the examinations process. Procedural rules pertaining to examination proceedings within the USPTO that generate such long patent delays may raise a substantive rights issue. If the effects of the rules are to increase patent pendency in this technology class, a court may find that the effects of these rules have an impact that contravenes the Patent Act. First, rules that unintentionally delay patenting may be contrary to the plain meaning of the statute which charges the Patent Office with issuing patents with a fixed lifetime that begins to deplete at the time of application. Also, a *sui generis* pendency effect due to rules that target a particular technology class may be rendered an impermissible construction of the statute, and a matter best reserved for the legislature to address in revisions to the statute itself.¹⁵⁵

VI. Conclusion

This article describes the process that led to the creation of administrative patent levers related to business method patent rule-making. In particular, policymakers in all three branches of government reacted strongly to the dangers posed by business methods. This institutional attention led to a series of rules at the USPTO to manage the quality of business method patent examination practices. This behavior is explained under the fire alarm theory of regulatory change, and the principal-agent theory of administrative decision-making, whereby an administrative agency responds to external institutional pressures and actors.

The business method patent levers allowed the USPTO to follow the lead of important institutional actors and to address the perceived harms of business methods. This was achieved by improving the quality of examination with respect to prior art. The various rules are analyzed and determined to be allowed under established administrative law doctrine. The issue of pendency for business methods, however, may present a challenge if administrative patent rules in some manner contribute to the lengthy pendency rates that currently plague this area of patenting, since a substantive rights challenge may be brought that attributes the lengthy delay to administrative rule-making.

¹ See, e.g. Edward Wyatt, *Senators to Debate Patent Bill*, NEW YORK TIMES, Feb. 27, 2011, available at: <http://www.nytimes.com/2011/02/28/business/28patent.html>

² The Senate approved the America Invents Act, S. 23, 112th Cong. (2011), by a vote of 95 to five; H.R. 1249 112th Cong. (2011), the America Invents Act, however, is pending a vote in house.

³ U.S. Senator Chris Coons, Statement after voting on proposed Senate bill (March 7, 2011), available at <http://coons.senate.gov/newsroom/releases/release/senator-coons-statement-on-successful-cloture-vote-on-the-america-invents-act>

⁴ There have been multiple instances where the legislature failed to institute patent reforms. See The Patent Reform Act of 2007 (H.R. 1908 and S.1145). Passed by the House on 9/7/2007. See Carl E. Gulbrandsen et al., *Patent Reform Should Not Leave Innovation Behind*, 8 J. MARSHALL REV. INTELL. PROP. L. 328 (2009) (describing the many congressional bills that have been proposed).

⁵ See David Orozco & James G. Conley, *Friends of the Court: Using Amicus Briefs to Identify Corporate Advocacy Positions in Supreme Court Patent Litigation*, 2011 U. Ill. J.L. Tech. & Pol'y 107 (2011) (discussing how patent law is viewed differently by corporations with differing attributes such as size and patent capabilities).

⁶ U.S. Representative Bob Goodlatte, Opening Statement from the Chairman of the Subcommittee on Intellectual Property, Competition, and the Internet, Committee on the Judiciary, U.S. House of Representatives, at 1, (March 10, 2011).

⁷ See, e.g. In re Seagate Technology, 497 F.3d 1360 (Fed. Cir. 2007) (increasing the standard of proof necessary to establish willful infringement); eBay v. MercExchange, 547 U.S. 388 (2006) (increasing uncertainty for patentees to obtain a permanent patent

injunction); *Bilski v. Kappos*, 130 S. Ct. 3218 (2010) (holding that business methods are patentable); *KSR v. Teleflex*, 550 U.S. 398 (2007) (increasing the obviousness standard). Since the Congress had failed to institute general patent reform, some scholars argued that the courts were the last viable option to substantially re-tailor the patent laws in light of the advancing technological changes in the economy, which require a more flexible, principles-based approach to patent doctrine. See Dan L. Burk and Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003).

⁸ The USPTO has described its workload crisis in the following manner: “Today, the United States Patent and Trademark Office (USPTO) is under siege. Patent application filings have increased dramatically throughout the world.”

⁹ USPTO, *The 21st Century Strategic Plan*, February 3, 2003, available at:

http://www.uspto.gov/web/offices/com/strat21/stratplan_03feb2003.pdf (last accessed May 30, 2011). Cf. Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495 (2001) (arguing that devoting resources to strengthen the patent examination process at the USPTO would be inefficient).

⁹ See *infra* discussion in Section II.

¹⁰ This labeling borrows from Professor Dan Burk and Mark Lemley’s conception of judicial patent levers. See Burk and Lemley, *supra* note 7 (describing how courts can tailor patent law doctrine to reach suitable outcomes depending on the context).

¹¹ See *How an Improved U.S. Patent and Trademark Office can Create Jobs*, *Hearing Before the U.S. House Subcommittee on Intellectual Property, Competition, and the Internet*, 112th Cong. 72 (2011) (statement of Robert J. Shapiro).

¹² Amazon’s one-click patent claimed the idea that a browser-enabled command to buy a certain item online will carry information about the purchaser’s identity by sending the server a “cookie”, or a kind of ID code that the browser received previously from the same server. See, Free Software Foundation, *Why We Boycott Amazon*, available at: <http://www.gnu.org/philosophy/amazon.html>

¹³ *Amazon.com v. Barnesandnoble.com*, 73 F. Supp. 2d 1228 (W.D. Wash. 1999), vacated, 239 F.3d 1343 (Fed. Cir. 2001).

¹⁴ U.S. Patent No. 7,024,381 (filed May 14, 2003).

¹⁵ *Blockbuster, Netflix Settle Patent Dispute*, REUTERS, June 27, 2007, available at: <http://www.reuters.com/article/2007/06/27/us-blockbuster-netflix-idUSWEN901620070627>. Blockbuster has since filed for bankruptcy.

¹⁶ Other highly visible cases raised an alarm over the breadth of business methods. The popular online auction site Priceline.com, for example, asserted its patent on reverse online auctions. See *Priceline.com v. Expedia*, Civil Action 99-CV-1991, D. Conn. (1999).

¹⁷ See Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577 (1999); Wade M. Chumney, David Baumer & Roby B. Sawyers, *Patents Gone Wild: An Ethical Examination and Legal Analysis of Tax-Related and Tax Strategy Patents*, 46 AM. BUS. L.J. 3 (2009); Robert E. Thomas, *Vanquishing Copyright Pirates and Patent Trolls: The Divergent Evolution of Copyright and Patent Laws*, 43 AM. BUS. L.J. 689-739 (2006).

¹⁸ Jacqui Cheng, *Amazon’s 1-Click Patent Picked Apart by U.S. Patent Office*, ARS TECHNICA, available at: <http://arstechnica.com/old/content/2007/10/amazons-1-click-patent-picked-apart-by-us-patent-office.ars>

¹⁹ See Thomas, *supra* note 17.

²⁰ See Arti Rai, *Addressing the Patent Gold Rush: The Role of Deference to PTO Patent Denials*, 2 WASH. U. J. L. & POL’Y 200, 202-212 (2000) (discussing how the CAFC’s reversal of the USPTO’s denial of biotechnology and computer-related patents led to a sharp rise in patent filings).

²¹ See Samuel Kortum and Josh Lerner, *Stronger Protection or Technological Revolution: What Is Behind the Recent Surge in Patenting?*, Carnegie-Rochester Series on Public Policy, 48, 247-304 (1998).

²² See Mark A. Lemley and Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. (2007).

²³ Burk and Lemley, *supra* note 7.

²⁴ *eBay v. Mercexchange*, *supra* note 7.

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- ²⁵ KSR v. Teleflex, *supra* note 7.
- ²⁶ Bilksi v. Kappos, *supra* note 7.
- ²⁷ See Arti Rai, *Building a Better Innovation System: Combining Facially Neutral Patent Standards with Therapeutic Regulation*, 45 HOUS. L. REV. 1037, 1038-39 (2008).
- ²⁸ eBay v. Mercexchange, *supra* note 7.
- ²⁹ Burk and Lemley, *supra* note 7.
- ³⁰ See CORNELIUS M. KERWIN, RULEMKAING – HOW GOVERNMENT AGENCIES WRITE LAW AND MAKE POLICY, 6 (1994). Cf. Lemley, *supra* note 8.
- ³¹ See Arti Rai, *Growing Pains in the Administrative State: The Patent Office's Troubled Quest for Managerial Control*, 157 U. PA. L. REV. 2051, 2051 – 2081 (2009) .
- ³² See DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE, Cambridge University Press (1990).
- ³³ 35 U.S.C. §101. The well established exceptions to patentability developed by the U.S. Supreme court are: laws of nature, physical phenomena, and abstract ideas. See *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).
- ³⁴ H.R. 1332, 107th Cong. (2001).
- ³⁵ *Id.* at §2(f).
- ³⁶ 160 F. 467 (2d Cir. 1908); Thomas R. Makin, *Hotel Checking: You Can Check Out Any Time You Want, But Can You Ever Leave? The Patenting of Business Methods*, 24 COLUM-VLA J.L. & ARTS 93, 94 (Fall 2000) Russell A. Korn, *Is Legislation The Answer: An Analysis of the Proposed Legislation for Business Method Patents*, 29 Fl State. U. L. Rev., 1367, 1369 (2002).
- ³⁷ See *Parker v. Flook*, 437 U.S. 584 (1978) (Holding that mathematical algorithms are not patentable).
- ³⁸ See *Gottschalk v. Benson*, 409 U.S. 63 (1972) (The Supreme Court rejected a patent on a computerized method for converting decimal numbers to binary numbers on the grounds that the patent applied an abstract scientific or mathematical principle).
- ³⁹ 450 U.S. 175 (1981).
- ⁴⁰ *Id.* (holding, however, that purely abstract ideas remain beyond patentability). See also *Arrhythmia Research Technology, Inc. v. Corazonix Corp.*, 958 F.2d 1053 (Fed. Cir. 1992) (holding that a mathematical process for detecting and analyzing electrocardiographic signals are patentable).
- ⁴¹ *State St. Bank & Trust Co. v. Signature Financial Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), cert denied, 525 U.S. 1093 (1999).
- ⁴² *Id.* at 1375.
- ⁴³ *Id.*
- ⁴⁴ See John R. Allison and Emerson Tiller, *The Business Patent Myth*, 18 BERKELEY TECH. L.J. (2003).
- ⁴⁵ USPTO Business Methods White Paper, Section II (The USPTO states that: “On January 8, 1889, the era of automated financial/management business data processing method patents was born. United States patents 395,781; 395,782; and 395,783 were granted to inventor-entrepreneur Herman Hollerith on that date”), *available at*: <http://www.uspto.gov/web/menu/busmethp/index.html#origins>
- ⁴⁶ *Merges*, *supra* note 17.
- ⁴⁷ *Bilski v. Kappos*, *supra* note 7.

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- ⁴⁸ *Id.*
- ⁴⁹ Daniel F. Spulber, *Should Business Method Inventions be Patentable?*, J. OF LEGAL ANALYSIS, 6 (forthcoming).
- ⁵⁰ *See e.g.*, U.S. Patent No. 6,088,685.
- ⁵¹ *See e.g.*, U.S. Patent No. 7,089,201.
- ⁵² *See e.g.*, U.S. Patent No. 6,567,790.
- ⁵³ *See e.g.*, U.S. Patent No. 5,960,411.
- ⁵⁴ Korn, *supra* note 36, at 1370; Rai, *supra* note 20, at 211.
- ⁵⁵ Korn, *supra* note 36, at 1370-71.
- ⁵⁶ *Id.*
- ⁵⁷ Proponents of open software also particularly critical of Internet-related business methods, since these patents may block open access to software and technology in general. *See* Lawrence Lessig, *Patent Problems*, THE STANDARD, (Jan. 21, 2000), available at: <http://www.lessig.org/content/standard/0,1902,8999,00.html> (last accessed May 25, 2011).
- ⁵⁸ HENRY CHESBROUGH, OPEN BUSINESS MODELS, xiii, (2006) (discussing how open innovation “means that companies should make greater use of external ideas and technologies in their own business, while letting their unused ideas be used by other companies”).
- ⁵⁹ *See generally* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 9 (2008) (arguing that vague patent claims in the high tech sector raise costs for the majority of firms); Michael A. Heller and Rebecca S. Eisenberg, *Can patents deter innovation? The anticommons in biomedical research*, SCIENCE (1998). Patents of poor quality also raise transaction costs overall, as parties wastefully litigate, and duplicate the USPTO’s efforts to determine patent validity. *See* John R. Thomas, *The Responsibility of the Rulemaker: Comparative Approaches to Patent Administration Reform*, 17 BERKELEY TECH. L.J. 727, 731 (2002).
- ⁶⁰ The following tactics employed by patent owners go beyond the traditional tactic of using the patent to assert exclusivity.
- ⁶¹ Richard J. Gilbert & David M.G. Newbery, *Preemptive Patenting and the Persistence of Monopoly*, 72 AM. ECON. REV. 514, 524–25 (1982).
- ⁶² *Id.*
- ⁶³ *See* Christine S. Paine, *Brand Name Drug Manufacturers Risk Antitrust Violations By Slowing Generic Production Through Patent Layering*, 33 SETON HALL L. REV. 479, 497–506 (2003).
- ⁶⁴ *See* Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63, 71-83 (2004) (discussing the problems created by the continuation practice).
- ⁶⁵ *See* MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118 (2007).
- ⁶⁶ Allison and Tiller, *supra* note 44.
- ⁶⁷ U.S. Patent No. 6,088,685 “Open End Mutual fund Securitization Process”.
- ⁶⁸ Allison and Tiller, *supra* note 44. Sources of non-patent literature include items such as trade articles, conference materials, technical papers and theses.
- ⁶⁹ Lemley, *supra* note 8.
- ⁷⁰ In 2001, Peter Detkin (then assistant general counsel at Intel Corp.) is said to have coined the term “patent troll” to describe firms that acquire patents to extract settlements from companies on dubious infringement claims.

⁷¹ Available at: <https://www.patentfreedom.com/research-lot.html>

⁷² RPX Corporation S-1 Registration statement at 2 (2011), available at: <http://sec.gov/Archives/edgar/data/1509432/000119312511012087/ds1.htm>

⁷³ See *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005).

⁷⁴ See Peter C. Grindley & David J. Teece, *Managing Intellectual Capital: Licensing and Cross-Licensing in Semiconductors and Electronics*, 39 CAL. MGMT. REV. 8, 8 (1997).

⁷⁵ See Orozco and Conley, *supra* note 5.

⁷⁶ Lemley and Shapiro, *supra* note 22.

⁷⁷ *Id.*

⁷⁸ *Eolas Technologies, Inc. v. Microsoft*, No. 04-1234 (Fed. Cir. March 2, 2005).

⁷⁹ This occurred even though the USPTO was going to invalidate many of the patent claims.

⁸⁰ See Simson L. Garfinkel, *Patently Absurd*, WIRED, 14, Jul. 1994; James Gleick, *Patently Absurd*, N.Y. TIMES MAG., 44, Mar. 12, 2000; Robert M. Hunt, *You Can Patent That?*, BUSINESS REV., 515, Jan. 1, 2001; *Patently Absurd?: Intellectual Property*, THE ECONOMIST, Jun. 23, 2001.

⁸¹ Allison and Tiller, *supra* note 44.

⁸² *Id.*

⁸³ *Id.*

⁸⁴ See Garfinkel, *supra* note 80; Gleick, *supra* note 80; Hunt, *supra* note 80.

⁸⁵ *Id.*

⁸⁶ Orozco and Conley, *supra* note 5.

⁸⁷ Colleen V. Chien, Patent Amicus Briefs: What the Courts' Friends Can Teach Us About the Patent System, at 35, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1608111

⁸⁸ The fire alarm model of regulatory change was first described by Mathew D. McCubbins and Thomas Schwartz, in *Congressional Oversight Overlooked: Police Patrols versus Fire Alarms*, AM. J. OF POL. SCI. 28: 16-79 (1984).

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ Kerwin, *supra* note 30, at 220-21.

⁹² Notably, the USPTO has not been given fee setting authority, which according to Professor Rai, is an important concomitant power for an agency with operations that are entirely fee based. Rai, *supra* note 32, at 2056. Under The Patent Act, the USPTO may currently keep its fees, however, this decision must be made annually by Congressional appropriators. See also 35 U.S.C. §42(e) (2006).

⁹³ Kerwin, *supra* note 30, at 29.

⁹⁴ *eBay Inc. v. MercExchange, L.L.C.*, 547 U. S. 388 (2006).

⁹⁵ *Id.*

⁹⁶ *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

⁹⁷ For example, in response to Amazon asserting its one-click business method patent, the Free Software Foundation (FSF) advocated a boycott of Amazon's services. Free Software Foundation, *Boycott Amazon!*, available at: <http://www.gnu.org/philosophy/amazon.html> ; See also Korn, *supra* note 36, at 1372.

⁹⁸ This is based on the author's own research of the various hearing transcripts.

⁹⁹ *Id.*

¹⁰⁰ *Id.* This is based on a keyword search for "business method".

¹⁰¹ See USPTO Business Methods White Paper, available at: <http://www.uspto.gov/web/menu/busmethp/index.html>

¹⁰² This supports the position adopted in Allison and Tiller, *supra* note 44, regarding a behavioral bias against business methods.

¹⁰³ 35 U.S.C. § 273 (1999).

¹⁰⁴ H.R. 1332, 107th Cong. (2001).

¹⁰⁵ Korn, *supra* note 36, at 1376.

¹⁰⁶ H.R. 1332, § 4.

¹⁰⁷ Federal Register: June 22, 2000 (Volume 65, Number 121)] [Notices] [Page 38811-38813] available at: <http://www.uspto.gov/news/pr/2000/00-41.jsp>

¹⁰⁸ *Id.*

¹⁰⁹ Notice available at: http://www.frbatlanta.org/news/conferences/03-financial_markets.cfm

¹¹⁰ USPTO Business Methods White Paper, *supra* note 101.

¹¹¹ FTC report at 14 – 15, available at: <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>

¹¹² *Id.* at 46.

¹¹³ NAS report, at 62.

¹¹⁴ Allison and Tiller, *supra* note 44.

¹¹⁵ NAS report, at 50.

¹¹⁶ Allison and Tiller, *supra* note 44.

¹¹⁷ USPTO press release, available at: <http://www.uspto.gov/news/pr/2000/00-41.jsp>

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ Burk and Lemley, *supra* note 7 (arguing for specific changes to patent doctrine within courts to deal with heterogeneous patent law preferences and context-dependent policy outcomes).

¹²¹ Patent quality primarily refers to issuing patents that meet the statutory criteria of novelty and non-obviousness.

¹²² White paper.

¹²³ USPTO announcement available at: <http://www.uspto.gov/web/offices/com/strat21/action/q3p17a.htm>

¹²⁴ Statement of Hon. Todd Q. Dickinson, Oversight Hearing on "The United States Patent and Trademark Office."

¹²⁵ Statement of James E. Rogan, Oversight Hearing, April 11, 2002.

¹²⁶ USPTO announcement, *available at*: http://www.uspto.gov/patents/init_events/fy07_peer_pilot.jsp

¹²⁷ USPTO announcement, *available at*:
<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/peerreviewexpansion071708.pdf>

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ Peer-to-Patent announcement, *available at*: http://dotank.nyls.edu/communitypatent/CPI_P2P_YearTwo_lo.pdf

¹³¹ USPTO announcement, *available at*: <http://www.uspto.gov/web/offices/com/sol/og/2010/week52/TOC.htm#ref15>

¹³² USPTO announcement, *available at*: <http://www.uspto.gov/web/offices/com/sol/og/2010/week52/TOC.htm#ref15>

¹³³ *See* *Tafas v. Dudas*, 559 F.3d 1345 (2009) (discussing how the USPTO issued rules to deal with backlog. USPTO Rules 78 and 114 dealt with limiting continuation applications and requests for continued examination. See 37 C.F.R. § 1.78(d)(1)(i); *Id.* § 1.114(f). Rules 75 and 265 required applicants who submitted applications with large numbers of claims to submit prior art to the examiner. *Id.* § 1.75(b)(1); § 1.265(a)).

¹³⁴ *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543, 1550 (Fed. Cir. 1996) ; *Tafas*, *supra* note 133.

¹³⁵ 35 U.S.C §2(b)2.

¹³⁶ *Animal Legal Defense Fund v. Quigg* 932 F.2d 920 (Fed. Cir. 1991).

¹³⁷ *American Hospital Ass'n v. Bowen*, 834 F.2d 1037 (D.C. Cir. 1987).

¹³⁸ *See* Brief of Amici Curiae of Intellectual Property and Administrative Law Professors, *Tafas v. Dudas*, 559 F.3d 1345 (2009).

¹³⁹ *Rai*, *supra* note 31, at 2056.

¹⁴⁰ *Id.*

¹⁴¹ *Tafas*, *supra* note 133, citing Thomas W. Merrill & Kristin E. Hickman, *Chevron's Domain*, 89 GEO. L.J. 833, 836 (2001).

¹⁴² *Tafas*, *supra* note 133.

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 1359, citing *Chevron*, 467 U.S. at 843.

¹⁴⁵ Relating to the new examiner category, mandatory field searching, and second pair of eyes review” See Section V, *supra*.

¹⁴⁶ *See* 35 U.S.C. Section 2(b)2.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ 35 U.S.C. § 2(b)(11)

¹⁵⁰ USPTO announcement, *available at*: <http://www.uspto.gov/web/patents/peerpriorartpilot/consent.pdf>

¹⁵¹ *Id.*

¹⁵² *Tafas*, *supra* note 133.

¹⁵³ *Id.*

¹⁵⁴ *See, e.g.* Claiming Business Method Patents: Taking Advantage of Long Pendency, *available at*: <http://www.krajec.com/blog/claiming-business-method-patents-taking-advantage-of-long-pendency>

¹⁵⁵ *E.g.* The first use defense, the Hatch Waxman Act dealing specifically the pendency issue involving pharmaceutical patents, semiconductor chip designs, vessel hull designs and design patents.