

TREATING THE DISEASE:
A FIRST AMENDMENT PRESCRIPTION FOR THE
U.S. PATENT SYSTEM[♦]

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INTRODUCTION

Intellectual Ventures is a company that buys patents from individual inventors to help them vindicate their patent rights against infringing companies.¹ Nathan Myhrvold founded Intellectual Ventures in 2000.² He says the company invests in invention.³ Myhrvold himself epitomizes innovation; he has been issued over 100 patents, served as Microsoft's Chief Technology Officer, discovered *T. rex* fossils on a dinosaur expedition, and authored an award-winning six-volume cookbook.⁴ Despite all of this, he has been labeled "patent troll public enemy #1."⁵ But are so-called patent trolls the real problem? This Note argues that patent trolls only represent a symptom of the underlying pathology in the U.S. patent system brought on by the issuance of overbroad patents in the areas of software and business methods.⁶ First Amendment freedom of speech principles could provide guidance to determine whether software or a business method represents an abstract idea or an invention that is truly eligible for patent protection.

According to PatentFreedom,⁷ Intellectual Ventures currently holds one of the largest patent portfolios—making it one of the most formidable patent trolls.⁸ Patent trolls, also known as non-practicing entities ("NPEs"), have been aggressively suing companies.⁹

¹ *When Patents Attack!*, NPR (July 22, 2011), <http://www.npr.org/blogs/money/2011/07/26/138576167/when-patents-attack>.

² *Id.*

³ *Id.*

⁴ See generally *id.*; *About Nathan Myhrvold*, NATHANMYHRVOLD.COM, <http://www.nathanmyhrvold.com/index.php/about> (last visited Feb. 21, 2014).

⁵ *When Patents Attack!*, *supra* note 1. A "patent troll" or a "Non-Practicing Entity" ("NPE") (also known as a "Patent Assertion Entity" or a "PAE") is a pejorative for an entity that uses its patents offensively, and "earns or plans to earn the majority of its revenue from the licensing or enforcement of its patents." *What is an NPE?*, PATENTFREEDOM, <https://www.patentfreedom.com/about-npes/background/> (last visited Feb. 21, 2014). This Note uses the term "Non-Practicing Entity" rather than "Patent Assertion Entity" as it is less negatively connoted and can refer to patent owners that develop technologies to transfer to the public domain instead of the market, such as academic institutions and research laboratories. THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION, FTC, at 8 (March 2011), available at <http://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf> [hereinafter FTC, EVOLVING IP MARKETPLACE].

⁶ See Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2120–21 (2013).

⁷ PatentFreedom is a membership organization concerned with patent analytics and IP business strategy. See generally *Subscriptions*, PATENTFREEDOM, <https://www.patentfreedom.com/subscriptions/> (last visited Feb. 21, 2014); and *Professional Services*, PATENTFREEDOM, <https://www.patentfreedom.com/services/> (last visited Feb. 21, 2014).

⁸ See *Largest Patent Holdings*, PATENTFREEDOM (July 14, 2014), <https://www.patentfreedom.com/about-npes/holdings/>.

⁹ Diane Bartz, *Obama Says Patent Reform Needs to go Farther*, REUTERS (Feb. 14, 2013),

Commentators suggest that overbroad business method patents (“BMPs”) have incited “a new breed of patent troll” that has extended the reach of its bludgeon to attack small businesses and users of everyday technologies.¹⁰ With patent litigation on the rise, the problem of overbroad BMPs has reached the highest levels of concern in the media,¹¹ among federal executive agencies,¹² and in Congress.¹³

Although Congress passed patent reform legislation in 2011,¹⁴ President Obama announced in 2013 that the “efforts at patent reform only went halfway to the point where they need to go.”¹⁵ The legislation, known as the Leahy-Smith American Invents Act (“AIA”), includes Section 18, the Transitional Program for Covered Business Method Patents (“CBM review”), which provides to challengers of BMPs a cheaper, faster process for review at the United States Patent and Trademark Office (“USPTO”) as an alternative to litigation.¹⁶ Though one of the goals of the AIA is to curb patent lawsuits filed by NPEs,¹⁷ since enactment, such lawsuits have increased.¹⁸ Retrospective

<http://www.reuters.com/article/2013/02/15/us-obama-patent-idUSBRE91E03320130215> (stating that “[t]he increase in patent lawsuits by these companies is so pronounced that they now constitute the majority of U.S. patent lawsuits” and that “61% of patent lawsuits filed through December 1[, 2012], were brought by patent-assertion entities”—compared with 45% in 2011 and 23% in 2009) (citing Colleen Chien, PATENT ASSERTION ENTITIES (2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2187314).

¹⁰ See Sam Gustin, *Congress is Poised to Send Patent Trolls Back to Their Caves: Momentum is Building in Washington to Reform America’s Patent System*, TIME (Dec. 3, 2013), <http://business.time.com/2013/12/03/congress-is-poised-to-send-patent-trolls-back-to-their-caves/>; Joe Mullin, *Patenting Everyday Life: “Business Method” Lawsuits Are Growing Fast*, ARS TECHNICA (Sept. 4, 2013), <http://arstechnica.com/tech-policy/2013/09/patenting-everyday-life-business-method-lawsuits-are-growing-fast/>.

¹¹ See generally David Segal, *Has Patent, Will Sue: An Alert to Corporate America*, N.Y. TIMES (July 13, 2013), http://www.nytimes.com/2013/07/14/business/has-patent-will-sue-an-alert-to-corporate-america.html?_r=0; Ashby Jones, *Patent ‘Troll’ Tactics Spread*, WALL ST. J. (July 8, 2012), <http://online.wsj.com/news/articles/SB10001424052702303292204577514782932390996>; *Last Week Tonight with John Oliver: Patents (HBO)*, YOUTUBE (Apr. 19, 2015), https://www.youtube.com/watch?v=3bxcc3SM_KA.

¹² See FTC, EVOLVING IP MARKETPLACE, *supra* note 5 at 8.

¹³ Leahy-Smith America Invents Act (AIA), Pub. L. No. 112-19, 125 Stat. 2011 (codified in sections of 35 U.S.C.). See generally *Trolls on the Hill: Congress Takes Aim at Patent Abusers*, THE ECONOMIST (Dec. 7, 2013), <http://www.economist.com/news/business/21591206-congress-takes-aim-patent-abusers-trolls-hill>; Gustin, *supra* note 10.

¹⁴ Leahy-Smith America Invents Act, 125 Stat. 2011.

¹⁵ Bartz, *supra* note 9.

¹⁶ Jeff Kettle, *Congress Giveth and Taketh Away: A Look at Section 18 of the America Invents Act and the Review of Business Method Patents*, 94 J. PAT. & TRADEMARK OFF. SOC’Y 201, 203 (2012) (stating the purpose of § 18 CBM review is “to provide challengers with a quicker and less-expensive vehicle to review ‘low-quality,’ ‘abstract,’ and ‘overbroad’ business method patents”).

¹⁷ Brian Pandya & Ryan Corbett, *America Invents Act Not Enough? – More Patent Reform on the National Radar*, THE LEGAL PULSE (July 17, 2013), <http://wlflegalpulse.com/2013/07/17/america-invents-act-not-enough-more-patent-reform-on-the-national-radar/>.

¹⁸ Ryan Davis, *Trolls File the Majority of Patent Litigation, Study Finds*, LAW360 (Apr. 9, 2013, 7:37 PM), <http://www.law360.com/articles/431322/trolls-file-the-majority-of-patent-litigation-study-finds>. See also Bartz, *supra* note 9. It is important to note, however, that the increase in

action is insufficient, and “a patent reform bill that does not address patent quality is like treating the symptoms instead of the disease.”¹⁹

Recently, the Supreme Court spoke on the issue of overbroad BMPs in *Alice Corp. v. CLS Bank*.²⁰ In *Alice*, the Court invalidated a BMP as an abstract idea excluded from patent eligible subject matter under 35 U.S.C. § 101 and set forth a two-part framework for analyzing the patent eligibility of business methods.²¹ While *Alice* has had the immediate effect of striking down several patents, many commentators believe that the decision is insufficient to reform the system, arguing that “every time there’s a court ruling it just means you have to word the patent claims differently.”²² What is needed is a clear limiting principle that notifies patent practitioners, courts, and the USPTO of what qualifies as patentable subject matter in light of current technological development.

This Note argues that the First Amendment may offer a solution to the problem of patent quality in software and business methods. Since justifications for excluding abstract ideas from patent eligibility echo First Amendment free speech theories, this type of analysis can provide a workable standard to deal with overbroad BMPs and future inventions in the fields of software and business methods. Part I of this Note discusses the background of the U.S. patent system and the history of business method patents. Part II discusses the so-called patent troll. The different types of trolling business models are discussed, followed by the argument that patent trolls, otherwise referred to as NPEs, are not the true problem, but rather they illuminate the underlying problem of patent quality in software and business methods. Part III provides an overview of recent patent reform measures, including section 18 of the AIA and the Supreme Court’s recent decision in *Alice Corp. v. CLS Bank*. Part IV explores a possible First Amendment remedy to the patent troll problem that the ACLU initially raised in the context of gene patents. An overview of First Amendment analysis is given, followed by a discussion of the analysis applied to well-known BMPs. Finally, Part V addresses counterarguments to the application of the First Amendment to BMPs.

lawsuits brought by NPEs may be due to the enactment of new misjoinder rules in the AIA, which limit the number of accused infringers in a single lawsuit. Chien, *supra* note 9.

¹⁹ See Timothy B. Lee, *Senator Says House Patent Bill is ‘Treating the Symptoms Instead of the Disease’*, WASH. POST (Dec. 17, 2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/12/17/senator-says-house-patent-bill-is-treating-the-symptoms-instead-of-the-disease/> (quoting Senator Charles Schumer).

²⁰ *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347 (2014).

²¹ *Id.*

²² Simon Phipps, *Alice is Killing the Trolls—But Expect Patent Layers to Strike Back*, INFO WORLD (Sept. 18, 2014), <http://www.infoworld.com/article/2607187/patents/alice-is-killing-the-trolls-but-expect-patent-lawyers-to-strike-back.html>.

I. BACKGROUND ON THE U.S. PATENT SYSTEM AND BUSINESS METHOD PATENTS

A. *The United States Patent System*

A patent is a government-sponsored monopoly that confers for a limited time to an inventor a right to exclude others from making, using, or selling the invention in the United States.²³ The U.S. patent system works best, and maximizes innovation, when its benefits are balanced between patent holders and competition in the market.²⁴ Competition stimulates innovation by fulfilling consumers' unmet needs or providing to them newer, better services.²⁵ Patents stimulate innovation by incentivizing research and development activities that would not otherwise occur but for the grant of a patent.²⁶

The U.S. Constitution expressly authorizes patents, giving Congress the power to “promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”²⁷ Inventors who disclose their inventions to the public in sufficient detail so as to enable a skilled person to make and use the invention receive in return the right to exclude others from capitalizing on the invention.²⁸ Although Congress created the procedures and institution of the U.S. patent system,²⁹ the judiciary has since been the “principal architect” of the patent laws.³⁰ The judiciary's role in driving patent policy³¹ is evident

²³ 35 U.S.C. § 154(a)(2). See also FTC, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 2, ch. 1 at 5 (2003), available at <http://www.ftc.gov/sites/default/files/documents/reports/promote-innovation-proper-balance-competition-and-patent-law-and-policy/innovationrpt.pdf> [hereinafter FTC, PROPER BALANCE]; Krysta Kauble, *Patenting Everything Under the Sun: Invoking the First Amendment to Limit the Use of Gene Patents*, 58 UCLA L. REV. 1123, 1131 (Apr. 2011); Colin P. Marks, *Opening the Door to Business Methods: State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 37 HOUS. L. REV. 923 (2000). “By 1432, the Senate of Venice had enacted a statute which provided the following: ‘If somebody invents any machine or process to speed up silk-making or to improve it, and the idea is actually useful, the inventor can obtain an exclusive privilege for ten years from the Guild Welfare Board of the Republic.’” *Id.* at 931–32.

²⁴ See FTC, PROPER BALANCE, *supra* note 23; see also John M. Golden, “Patent Trolls” and Patent Remedies, 85 TEX. L. REV. 2111, 2117 (2007) (stating that “[i]t has long been recognized that the proper design of United States patent law is a question of balance”).

²⁵ FTC, PROPER BALANCE, *supra* note 23, Executive Summary, at 1.

²⁶ *Id.* at 2.

²⁷ U.S. CONST. art. I, § 8, cl. 8.

²⁸ Golden, *supra* note 24, at 2117 (explaining that “in exchange for public disclosure sufficient ‘to enable any person skilled in the art . . . to make and use’ a novel, useful, and nonobvious invention, the public provides a limited-term ‘right to exclude’ others”).

²⁹ Sarah Tran, *Patent Powers*, 25 HARV. J.L. & TECH. 595, 617 (2012).

³⁰ Craig Allen Nard, *Legal Forms and the Common Law of Patents*, 90 B.U. L. REV. 51 (2010). Nard explains, “while Congress and the courts each have a hand in constructing the latticework of patent law, judges—not the authors of *lex scripta*—are the principal architects.” *Id.* at 54. Nard further states, “United States Patent law is designed to invite, indeed require, a strong judicial voice.” *Id.* at 59.

³¹ Nard states, “the patent system is best served when the reform-minded engage patent law’s

given the broad language of the Patent Act, which has changed little over the past 220 years,³² and the need for and creation of a single national court to handle patent appeals.³³

The language of 35 U.S.C. § 101 evinces the necessity of congressional deference to the judiciary, particularly with respect to patent-eligible subject matter.³⁴ Section 101 defines patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.”³⁵ Notwithstanding Congress’s circular definition of “process” as “mean[ing] *process*, art or method, and includes a new use of a *known process*,”³⁶ the Supreme Court stepped in to formulate a more precise definition of “process” as “a mode of treatment of certain materials to produce a given result.”³⁷

In addition to refining patent eligibility, the judiciary has identified exceptions. The Supreme Court has held that “laws of nature, physical phenomena, and abstract ideas” are ineligible for patent protection.³⁸ However, section 101 and its judicially created exceptions fail to mention excludable material relating to processes.³⁹ This omission has created problems for business methods, which commentators and courts have implicitly interpreted to be among the exceptions to patentability,⁴⁰ and which are largely blamed for the rise of the patent trolls.

B. History of Business Method Patents

In *State Street Bank & Trust Co. v. Signature Financial Group*, the First Circuit held that invalidity of an overbroad patent should be judged under other statutory requirements—not on the grounds that the patent

traditional policy-driver—the judiciary.” *Id.* at 55.

³² *Id.* at 54.

³³ *Id.* at 74. Congress recognized the need for a single national court for patent appeals long before the creation of the Federal Circuit in 1982. *See id.* at n.113.

³⁴ Nard, *supra* note 30, at 90. “Faced with the non-linear path of technological innovation and diversity of inventions, it is understandable and desirable that Congress maintained § 101’s broad standard, which implicitly signaled to the courts to fill in the statutory interstices.” *Id.*

³⁵ 35 U.S.C. § 101. Note that 35 U.S.C. § 100 supplements § 101 in defining patent-eligible subject matter. Other statutory requirements for patentability are found in other sections of Title 35, United States Code. *See also* 35 U.S.C. §§ 102, 103 and 112.

³⁶ 35 U.S.C. § 100 (1994) (emphasis added).

³⁷ *Cochrane v. Deener*, 94 U.S. 780, 788 (1876) (cited positively in *Diamond v. Diehr*, 450 U.S. 175, 183 (1981) and *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)). The mode of treatment to produce a given result may include transformation and reduction of the subject matter to a different state. 94 U.S. 780 at 788.

³⁸ *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

³⁹ Marks, *supra* note 23, at 934.

⁴⁰ *See* Matthew D. Thayne, *Business Method Patents, Franchises, and the First Inventor Defense Act: Something Must Give*, 2001 UTAH L. REV. 863, 866 (2001) (stating, “business methods were interpreted as among a number of exceptions to patentable subject-matter for nearly a century”). *See also* Marks, *supra* note 23, at 935 (explaining the exclusion of business methods from patent protection as deriving “from the principle that an idea or algorithm cannot, by itself, be patented”).

can be characterized as a business method, which may or may not resemble an abstract idea ineligible for patent under section 101.⁴¹ Judge Newman advanced this position four years earlier in the case of *In re Schrader*.⁴² In dissent, she argued for the abrogation of any business method exception to section 101, reasoning that the complexity of modern business systems has blurred the distinction between methods of doing business and the means for carrying out business.⁴³ This is the state of business methods and technology today.⁴⁴

Judicial acceptance of business methods, paired with the rapid growth of the Internet, has incited the patenting of technological approaches to conducting business.⁴⁵ Although *State Street* and subsequent cases⁴⁶ suggest that business method claims are subject to invalidity on other statutory grounds, the reality is that the integration of business concepts with new technology has made it difficult to reject business method claims on those other grounds.⁴⁷

Business method patent (“BMP”) critics argue that “business is not a new area of discovery branching out from an already known, patentable field”⁴⁸ and that these patents are not needed to encourage the inventor to engage in developing the method.⁴⁹ The trend for

⁴¹ *State St. Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368, 1377 (Fed. Cir. 1998) (“Whether the patent’s claims are too broad to be patentable is not to be judged under § 101, but rather under §§ 102, 103, and 112.”).

⁴² *In re Schrader*, 22 F.3d 290 (Fed. Cir. 1994). Note that a business methods exception to § 101 existed, at least ostensibly, since 1908 when the Second Circuit declared that “no mere abstraction, no idea, however brilliant, can be the subject of a patent irrespective of the means designed to give it effect.” *Hotel Sec. Checking Co. v. Lorraine Co.*, 160 F. 467, 469 (2d Cir. 1908). See also Marks, *supra* note 23, at 937; Lois Matelan, *The Continuing Controversy Over Business Method Patents*, 90 J. PAT. & TRADEMARK OFF. SOC’Y 125, 128 (2008).

⁴³ *In re Schrader*, 22 F.3d 290, at 298. See also Marks, *supra* note 23, at 943.

⁴⁴ See John F. Duffy, *Why Business Method Patents?*, 63 STAN. L. REV. 1247, 1263 (2011) (explaining that the rise of business method patents “lies in developments outside of legal institutions: economics, business, finance, and similar fields began to develop into much more technological disciplines during the last quarter of the twentieth century”).

⁴⁵ See Thayne, *supra* note 40, at 863 (“[W]ith the advent of the Internet and increasing numbers of businesses taking advantage of the many new opportunities that the Internet offers, the patentability of business methods is more meaningful than ever before.”). A recent study conducted by PatentFreedom has revealed that the number of BMP applications filed in the USPTO is increasing. Mullin, *supra* note 10.

⁴⁶ *Bilski v. Kappos*, 561 U.S. 593 (2010) (affirming the rejection of a method of hedging losses in one segment of industry by investing in other segments of that industry without condemning all BMPs).

⁴⁷ See Rochelle Cooper Dreyfuss, *Are Business Methods Bad for Business?*, 16 SANTA CLARA COMPUTER & HIGH TECH. L.J., 263, 268–69 (stating, “[t]he standard of novelty and inventiveness are not absolute” but that they depend on the field of art. Because, relative to other arts, computer technology and the Internet are still maturing, the threshold for novelty and inventiveness in these areas is low.). Note that if the USPTO cannot establish a prima facie case for rejection of the patent application, it must issue the patent. See FTC, PROPER BALANCE, *supra* note 23, at 9.

⁴⁸ Malla Pollack, *The Multiple Unconstitutionality of Business Method Patents: Common Sense, Congressional Consideration, and Constitutional History*, 28 RUTGERS COMPUTER & TECH. L. J. 61, 77 (2002).

⁴⁹ See Thayne, *supra* note 40, at 865. Thayne cites Rochelle Cooper Dreyfuss who argues that

business methods, however, has been pro-patent.⁵⁰ The sweeping constitutional objective and broad statutory language are intended to promote access to the patent system and accommodate changing technologies.⁵¹ Unwillingness to apply strict tests to subject matter that is “not easy to define”⁵² therefore requires analysis of business method claims on a case-by-case basis.⁵³ Ultimately, the problem with BMPs is the uncertainty surrounding them deriving from both the nature of the invention and the flexible judicial approach to broad statutory language.⁵⁴

II. NON-PRACTICING ENTITIES AND PATENT TROLLING

A. *Non-Practicing Entities, a.k.a. “Patent Trolls”*

The prototypical inventor profits by turning his or her ideas into products through manufacturing and sales against competitors in the marketplace. Inventors must first make expenditures in order to create and manufacture their product, and then disclose their inventions through transfer to the marketplace.⁵⁵ Upon transfer, competition normally drives the price down to marginal costs.⁵⁶ Many practicing entities thus rely on patents to allow them to set prices above marginal costs and recoup their initial investments by excluding competitors from

because business already exists in the public domain, there is little need to incentivize disclosure of business through the grant of a patent, and because all patents impose social costs “[t]he case for patents on business methods is simply not there, at least not in general.” See Dreyfuss, *supra* note 47, at 275–77.

⁵⁰ See Marks, *supra* note 23, at 953. See generally also Brief in Support of Neither Party, *In re Bernard L. Bilski and Rand A. Warsaw*, 545 F.3d 943 (2010), Appeal from the United States Patent and Trademark Office, Board of Patent Appeals and Interferences (Apr. 7, 2008) [hereinafter Regulatory Datacorp Brief].

⁵¹ Regulatory Datacorp Brief *supra* note 50, at 7 (stating that “Congress intentionally crafted broad language for access to the patent system and the courts have avoided rigid, formalistic tests.”); See Nard, *supra* note 30, at 55 (stating that “patent law has and must continue to adapt to a changing world of technological innovation.”)

⁵² Regulatory Datacorp Brief, *supra* note 50, at 17–18 (citing *Lab. Corp. of Am. Holdings v. Metabolite Labs. Inc.*, 126 S. Ct. 2921, 2926 (2006)).

⁵³ *Bilski v. Kappos*, 561 U.S. 593, 609 (2010) (The Court concluded that “the Patent Act leaves open the possibility that there are at least some processes that can be fairly described as business methods that are within patentable subject matter under § 101.”); Michael Risch, *Forward to the Past*, CATO SUP. CT. REV. 333, 333, 368 (2010) (explaining that the Supreme Court’s decision in *Bilski v. Kappos* considered and chose to emphasize a flexible interpretation of a broad statute) (the Court “did not want to foreclose the debate nor invalidate a large number of existing patents” as “Justice Kennedy wrote: ‘Rather than adopting categorical rules that might have wide-ranging and unforeseen impacts, the Court resolves this case narrowly . . .’”).

⁵⁴ “If business methods could be patented, then many business decisions, no matter how small, could be potential patent violations. Businesses would live in constant fear of litigation” *Bilski*, 561 U.S. at 654.

⁵⁵ Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 994 (1997).

⁵⁶ *Id.* at 995.

selling copies of their product.⁵⁷ Patent trolls, however, have different business models.

Patent trolls—less derisively known as NPEs, or non-practicing entities—are patent owners who, instead of developing products or services themselves, profit by acquiring patents from others and charging royalties or seeking settlement demands against practicing entities.⁵⁸ Although the secondary market for patented innovation has long existed and is how many inventors wish to commercialize their IP, the fact that NPEs do not engage in technology development, manufacturing, and transfer, means that they have less complex business operations that immunize them from counter-suits, and as a result, they are generally seen as deterring innovation by raising costs and risks for new developers.⁵⁹

B. Patent Trolling

In some sense, the patent laws can be said to encourage opportunism by not requiring proof that the alleged infringer actively or knowingly copied the patent holder's product, or that the patent holder ever made the product.⁶⁰ A patent can be bought, sold, and asserted by any entity against a party who knowingly copied, or unknowingly and independently developed, the product.⁶¹

A report to the Federal Trade Commission and Department of Justice found increased NPE activity, estimating that NPEs were filing four times as many suits in 2013 as in 2005.⁶² The report further

⁵⁷ *Id.* at 995–96 (stating that “government has created intellectual property rights in an effort to give authors and inventors control over the use and distribution of their ideas, and therefore encourage them to invest efficiently in the production of new ideas”).

⁵⁸ One NPE asserted a patent portfolio purchased for only \$1. See Joe Mullin, *Patent Stunner: Under Attack, Nation's Most Notorious "Troll" Sues Federal Gov't*, ARS TECHNICA (Jan. 14, 2014, 9:44 AM), <http://arstechnica.com/tech-policy/2014/01/patent-stunner-under-attack-nations-most-notorious-troll-sues-federal-govt/> (reporting that “settlement documents show that [the patent troll] MPHJ bought its patents for \$1 from the previous owner, Project Paperless”). In 2012 the Virginia-based LLC, Project Paperless, (apparently headquartered in a two-bedroom condominium in Alexandria, VA) sent letters to several small and mid-size businesses demanding royalties ranging between \$900 to \$1,200 per employee for a license to “distributed computer architecture” patents—essentially a license to use office scanners—which would total into the hundreds of thousands for some businesses. See Joe Mullin, *Patent Trolls Want \$1,000—For Using Scanners*, ARS TECHNICA (Jan. 2, 2013, 9:30 AM), <http://arstechnica.com/tech-policy/2013/01/patent-trolls-want-1000-for-using-scanners/>.

⁵⁹ See Julie Samuels, *Patent Trolls Are Draining Our Innovation Economy*, POLITICO (Mar. 6, 2013, 9:27 PM), <http://www.politico.com/story/2013/03/patent-trolls-are-draining-our-innovation-economy-88517.html> (“Patent trolls—entities that neither make nor sell anything but use patents to sue, and threaten lawsuits on, unsuspecting businesses—have become a serious drain on our innovation economy.”). See also FTC, *EVOLVING IP MARKETPLACE*, *supra* note 5, at 9. See also Lemley & Melamed, *supra* note 6, at 2162 (discussing the asymmetrical costs between NPEs and practicing entities during discovery).

⁶⁰ Lemley & Melamed, *supra* note 6, at 2121–22.

⁶¹ *Id.*

⁶² COMMENTS OF GOOGLE, BLACKBERRY, EARTHLINK & RED HAT TO THE FEDERAL TRADE

estimated that NPE-initiated suits cost U.S. companies \$29 billion in direct payouts to NPEs—\$80 billion spent when accounting for all costs—in 2011.⁶³ High litigation costs compel defendants to settle or enter licensing agreements, making patent trolling a lucrative business.⁶⁴

Patent trolling assumes three general business models.⁶⁵ One is the “lottery-ticket troll,” which holds a patent covering a significant area of technology that it hopes to successfully assert against a deep-pocket player entrenched in the industry.⁶⁶ The “bottom feeder troll” asserts a variety of low-quality patents against several smaller players in the hopes of procuring settlements.⁶⁷ Finally, the “patent aggregator troll” acquires many patents and relies on the sheer size of the patent portfolio to demand royalties.⁶⁸ Yet the different patent troll business models illustrate that NPEs are only a symptom of the problem.⁶⁹

Despite engaging in similar behaviors, practicing entities are not accused of exploiting the patent system. The lottery-ticket troll, for example, is congruent to the individual inventor who develops and obtains a patent but does not have enough the resources to commercialize and enforce it.⁷⁰ Like the bottom-feeder trolls, some practicing entities engage in “patent privateering,” where they accumulate and spin off their patent portfolios to have others enforce

COMMISSION AND U.S. DEPARTMENT OF JUSTICE ON PATENT ASSERTION ENTITIES 2 (2013) [hereinafter COMMENTS ON PAES], available at <https://docs.google.com/file/d/0BwxyRPFduTN2VTE4TXiNcW9MR2s/edit>.

⁶³ *Id.* at 1, 9. When a NPE asserts a patent against a practicing entity, the combined legal and settlement costs yield average total litigation costs of “\$1.75 million for small/medium companies and \$8.79 million for large companies.” *Id.* at 9 (citing James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, Boston Univ. School of Law Working Paper No. 12-34 at 2 (June 22, 2012) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2091210); see also Samuels, *supra* note 59, at 2.

⁶⁴ COMMENTS ON PAES, *supra* note 62, at 10. For companies charged with infringement by PAEs, the prospect of facing the costs of litigation lead them “to settle even the most unmeritorious of claims.” *Id.*

⁶⁵ FTC, EVOLVING IP MARKETPLACE, *supra* note 5, at 62–63; Lemley & Melamed, *supra* note 6, at 2126. As many as 17 different business models designed to promote patent sale and/or licensing have been identified, but each falls into one of the broader categories described in this Note.

⁶⁶ Lemley & Melamed, *supra* note 6, at 2126. Lemley and Melamed refer to these types of trolls as “‘lottery-ticket trolls’ since they are playing an uncertain shot at a big payout.” *Id.*

⁶⁷ *Id.* at 2126. See Timothy B. Lee, *There Are Two Patent Troll Problems. The House Bill Only Fixes One of Them*, WASH. POST (Dec. 4, 2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/12/04/there-are-two-patent-troll-problems-the-house-bill-only-fixes-one-of-them/>.

⁶⁸ Lemley & Melamed, *supra* note 6, at 2126–27. Patent aggregators often license without litigation “because defendants are reluctant to challenge an entire portfolio of patents,” especially where the aggregator holds many patents “that read on a particular target [such] that a challenge to the validity of the patents makes little sense.” *Id.* at 2127.

⁶⁹ *Id.* at 2121.

⁷⁰ TJ Chiang, *What is a Troll Patent and Why Are They Bad?*, PATENTLYO (Mar. 6, 2009), <http://patentlyo.com/patent/2009/03/what-is-a-troll-patent-and-why-are-they-bad.html> (arguing that the individual inventor who cannot successfully commercialize his patent and sues the industry years later is no different than a troll).

them.⁷¹ Practicing entities that engage in “defensive patenting” and obtain large portfolios to ward off suits, avoid licensing fees, and prevent competitors from blocking their products, closely resemble the patent aggregator troll.⁷² The designation of the entity, therefore, is irrelevant and demonstrates that the difference between practicing entities and non-practicing entities is in patent quality and the “troll patent.”⁷³

C. BMPs as Troll Patents

Troll patents, such as overbroad BMPs, usually issue in new technological areas where the state of the law is unclear, patent examiners are unfamiliar with the prior art, and USPTO guidelines for examination and classification are yet to be defined.⁷⁴ These patents are problematic because their overbroad claims are susceptible to being stretched unpredictably to read on unrelated products.⁷⁵

One commentator defined “troll patents” as those having no licensees practicing the patented invention except for defendants who

⁷¹ Lemley & Melamed, *supra* note 6, at 2120–21. Patent privateers involve “product-producing companies that spin off patents or ally with trolls to target other firms with lawsuits.” *Id.* at 2137 (citing Tom Ewing, *Indirect Exploitation of Intellectual Property Rights by Corporations and Investors*, 4 HASTINGS SCI. & TECH. L.J. 1, 5 (“IP privateering . . . [is] the assertion of IPRs [intellectual property rights] by an entity (the privateer), typically in the form of an NPE, against a target company for the direct benefit of the privateer and the consequential benefit of a sponsor.”)).

⁷² See Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and its Implications for the Patent System*, 62 HASTINGS L.J. 279, 321 (2010) (describing patent aggregation practices by large practicing entities such as Cisco and Sun Microsystems).

⁷³ Chiang, *supra* note 70. See also James Bessen, Jennifer Ford, & Michael Meurer, *The Private and Social Costs of Patent Trolls*, THE CATO INSTITUTE (Winter 2011-2012 Vol. 34 No. 4) at 28 available at <http://www.cato.org/regulation/winter-2011-2012> (stating that “patents on software and business methods are litigated much more frequently because they have ‘fuzzy boundaries.’ The scope of these patents is not clear, they are often written in vague language, and technology companies cannot . . . understand what they claim.”).

⁷⁴ See John R. Allison & Emerson H. Tiller, *The Business Method Patent Myth*, BERKELEY TECH. L.J. 987, 1077 (2003) (stating that BMPs “are indeed deficient in some ways, and that these deficiencies were a natural consequence of the patent system attempting to grapple with a new technology only recently recognized as patentable subject matter”). See also Steve Seidenberg, *Reinventing Patent Law*, 94-FEB A.B.A. J. 58, 59 (2008) (explaining that “the PTO was issuing a bevy of weak or overbroad patents—in part because patent officers were not sufficiently familiar with the prior art in newly patentable areas, such as business methods”). Herbert Hovenkamp, *Innovation and the Domain of Competition Policy*, 60 ALA. L. REV. 103, 120 (2008) (“Many patents, particularly those pertaining to business methods and software, suffer from ‘abstract’ or vague claims capable of being construed very broadly so as to apply to situations far different from the invention in question, often straying to things that the inventor very likely did not contemplate at all.”).

⁷⁵ FTC, EVOLVING IP MARKETPLACE, *supra* note 5, at 55; see also Rob Goodier, *Patent Trolls: How Bad is the Problem?*, POPULAR MECHANICS (Oct. 25, 2011, 12:00 PM), <http://www.popularmechanics.com/technology/gadgets/news/patent-trolls-how-bad-is-the-problem> (“When you grant a property right that’s open to such ambiguous interpretations, then you’re creating a land mine, an opportunity for litigation.”).

have taken the licenses as settlement.⁷⁶ Generally, these patents “contribute nothing useful to society, in so far as the people who actually make anything useful would have done it equally in the absence of the patent.”⁷⁷ A recent study on patent infringement litigation demonstrated that troll patents are predominantly BMPs and are increasingly asserted in patent infringement suits.⁷⁸ While they might not hold up in court,⁷⁹ BMPs are increasingly asserted against non-tech companies, such as supermarkets and restaurants, and even individual end users who do not have the resources to litigate.⁸⁰

III. CONGRESSIONAL AND JUDICIAL RESPONSES

A. Covered Business Method Review

On September 16, 2011, the Obama Administration enacted the America Invents Act (“AIA”), which created new mechanisms for challenging patent validity through the Patent Trial and Appeal Board (“PTAB”) at the USPTO.⁸¹ One of those mechanisms is the Transitional Program for Covered Business Method Patent and Technological Invention, with which the Obama administration sought to quell the rising numbers of NPEs asserting overbroad BMPs.⁸² Specifically, the

⁷⁶ Chiang, *supra* note 70. Other characteristics of troll patents are that they: (1) are owned by someone who does not practice the patented invention, (2) are infringed by and asserted against non-copiers exclusively or almost exclusively, and (3) are asserted against a large industry that is composed of non-copiers. *Id.*

⁷⁷ *Id.*; see also Lemley & Melamed, *supra* note 6, at 2168.

⁷⁸ *The Growing Use of Business Method Patents in NPE Litigation*, PATENT FREEDOM (Sept. 4, 2013), <https://www.patentfreedom.com/about-npes/blog/the-growing-use-of-business-method-patents-in-npe-litigation/> (reporting that the share of NPE/PAE-initiated lawsuits involving BMPs rose from 27% in 2005–2006 to 41% in 2011–2012). Findings of the study are found in *Investigations Into Npe Litigation Involving Business Method Patents*, PATENT FREEDOM (Sept. 4, 2013), available at https://www.patentfreedom.com/wp-content/uploads/2013/09/NPE-Litigations-involving-Business-Method-Patents_Sept-4-2013.pdf [hereinafter, *BMP Litigation Investigation*].

⁷⁹ See John R. Allison, Mark A. Lemley & Joshua R. Walker, *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 680–81 (2011) (describing how “NPEs and software patentees overwhelmingly lose their cases”).

⁸⁰ See *BMP Litigation Investigation*, *supra* note 78, at 6–8. See also Joe Mullin, *Supermarkets’ Solution to Patent Trolls: Fight It Out At the USPTO*, ARS TECHNICA (July 22, 2013), <http://arstechnica.com/tech-policy/2013/07/supermarkets-solution-to-patent-trolls-fight-it-out-at-the-uspto/>; Mullin, *Patenting Everyday Life*, *supra* note 10. See also Mullin, *Patent Stunner*, *supra* note 58.

⁸¹ Steven Seidenberg, *AIA Provides New Ways to Challenge Issued Patents*, INSIDECOUNSEL (Nov. 28, 2012), <http://www.insidecounsel.com/2012/11/28/aia-provides-new-ways-to-challenge-issued-patents>.

⁸² See Definitions of Covered Business Method Patent and Technological Invention, 77 Fed. Reg. 48,734 (Aug. 14, 2012) (to be codified at 37 C.F.R. pt. 42). See also Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIRCUIT B.J. 539, 630 (2012) (quoting Representative Grimm who described § 18 as “a crackdown on low-quality business method patents,” and Representative Crowley who explained that BMPs “are nuisance patents used to sue legitimate businesses”). Other proceedings enacted under the AIA are the Inter Partes Review and the Post-Grant Review. Note that CBM review is the only post-grant review under

purpose of enacting covered business method (“CBM”) review was to establish a more efficient engine within the patent system to invalidate overbroad BMPs and rein in NPE activity.⁸³

CBM review accomplishes its goal by allowing defendants to stay patent litigation and use USPTO procedures to challenge patents.⁸⁴ This is a favorable alternative to litigation because the PTAB conducts the review, and it is composed of administrative law judges who have greater power to render decisions than examiners and much more expertise in technology than juries.⁸⁵ Further, unlike most other USPTO proceedings, the CBM review retains some litigation-style procedures.⁸⁶

Despite its benefits, Congress limited the availability of CBM review to strictly-defined “covered business method patent[s].”⁸⁷ Section 18(d)(1) of the AIA defines a covered business method patent as “a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, except that the term does not include patents for technological inventions.”⁸⁸ CBM review is therefore limited to patents that only cover methods used in the financial services industry.⁸⁹

Judicial history indicates that financial businesses were the earliest

the AIA that allows challenges on § 101 patent eligibility grounds.

⁸³ Definitions of Covered Business Method Patent and Technological Invention, 77 Fed. Reg. 48,734. Commentators praise CBM review because it provides a “means to address a particularly heinous abuse: manipulating the patent system through aggressive use of unclear and overly broad business method patents by patent aggression entities.” Mark Bohannon, *Expanding the ‘Covered Business Method’ program: Sensible Patent Reform . . . and Why Opponents Have It Wrong*, OPENSOURCE (Sept. 24, 2013), <http://opensource.com/law/13/9/cbm-patent-reform-expansion>.

⁸⁴ See generally Matal, *supra* note 82, at 640.

⁸⁵ Steven Seidenberg, *New Review*, 99 FEB A.B.A. J. 17 (2013).

⁸⁶ *Id.* Seidenberg reports that the litigation-style procedures allowed include “direct testimony of fact and expert witness testimony in the form of declarations, cross-examination depositions [and] limited discovery—greater than current USPTO proceedings but less than district court litigation.” *Id.* (internal quotations omitted). The USPTO has also announced that CBM reviews will be decided within 12 months, as opposed to the median timeframe of 2.5 years for patent litigation. *Id.* (citing a 2011 study by PricewaterhouseCoopers).

⁸⁷ Leahy-Smith America Invents Act, 18(a)(1)(A), (E), (a)(2), 125 Stat. at 329–30.

⁸⁸ *Id.* at sec. 18(d)(1), 125 Stat. at 331. The legislative history reveals that the exception of “patents for technological inventions” was meant to include “inventions relating to computer operations or the application of the natural sciences or engineering,” but not those patents that relate to accomplishing abstract business concepts whether or not accomplished through the use of a computer. See Matal, *supra* note 82, at 634 (citing 157 Cong. Rec. S1379 (daily ed. Mar. 8, 2011)). Because the AIA did not specify what patents constitute “technological inventions,” the USPTO has given itself discretion to decide on a “case-by-case basis: whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution.” *Transitional Program For Covered Business Method Patents*, USPTO.GOV (updated May 13, 2013, 5:30 PM), http://www.uspto.gov/aia_implementation/faqs_covered_business_method.jsp.

⁸⁹ See Matal, *supra* note 82, at 635–36 (citing 157 Cong. Rec. S1364–65 (daily ed. Mar. 8, 2011) (statement of Sen. Schumer)).

targets of NPE-initiated suits, which inspired the section 18 limitation of CBM review to only those BMPs relating to financial products or services.⁹⁰ However, Internet technology—characterized by short product lifetimes and cumulative development—has produced an excess of overbroad BMPs reading on outdated technology, so that NPEs have acquired BMPs covering “processes used everyday in common technologies by thousands of businesses and millions of Americans.”⁹¹

To counter the threat of continued patent assertions by NPEs against a widening class of potential defendants, New York Senator Charles Schumer proposed the Patent Quality Improvement Act of 2013, which sought primarily to expand the definition of “covered business method” to all business method patents.⁹² Efforts like Senator Schumer’s reflect legislative and regulatory reform priorities,⁹³ the USPTO’s intuition,⁹⁴ and the reality of technological advances in the digital domain.

Yet, the proposal was rejected and a provision similar to the Patent Quality Improvement Act was dropped in the Innovation Act of 2013.⁹⁵

⁹⁰ The current version of § 18 CBM review was enacted “at the behest of banks tired of being targeted by troll lawsuits.” Lee, *supra* note 19. See Kettle, *supra* note 16, at 208–09 (noting that “the invalidated BMP in *Bilski* was a ‘series of [financial] transactions between said commodity provider and consumers,’ and the patent in *State Street* was a ‘financial service configuration.’”).

⁹¹ Internet Association, Letter to Congress, *available at* http://internetassociation.org/wp-content/uploads/2013/07/Letter_-_73013.pdf; the supporters include Amazon, AOL, Netflix, Dell, eBay, Facebook, The Kroger Co., Macy’s, Walmart, and Whataburger —illustrating the variety of companies concerned with patent trolls. See also the activities of Project Paperless, *supra* note 58. Other notable, inimical BMPs cover the retrieval of data from a database, and the sale of things online. See, respectively, U.S. Patent No. US 6128617 (filed Nov. 24, 1997) (claiming “[a] method of retrieving information from a database having plural fields”), and U.S. Patent No. US 7624044 (filed May 20, 1996) (claiming “[a]n apparatus to market and/or sell goods and/or services over an electronic network”).

⁹² Patent Quality Improvement Act of 2013, S. 866, 113th Cong. (2013). Where the new definition for “covered business method” would read:

IN GENERAL – For the purposes of this section, the term ‘covered business method patent’ means a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or an enterprise, product, or service, except that the term does not include patents for technological inventions.

Id.

⁹³ The White House, Office of the Press Secretary, FACT SHEET: White House Task Force on High-Tech Patent Issues (June 4, 2013), <http://www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues> (calling for expansion “to include a broader category of computer-enabled patents and permit a wider range of challengers to petition for review of issued patents before the Patent Trial and Appeals Board”).

⁹⁴ Early PTAB rulings such as *SAP America* demonstrate the PTAB’s willingness to apply a more inclusive definition of covered business method. See Jason E. Stach & Andrew G. Strickland, *Exploring Expanding the Scope of Covered Business Method Reviews*, 26 NO. 1 INTEL. PROP. & TECH. L.J. 20, 20–21 (Jan. 2014) (explaining that the PTAB “leveraged the legislative history and what it viewed as the intent behind CBM review” in determining “that the term ‘financial’ is an adjective that simply means relating to money matters”). In addition to expanding the scope of the definition, the PTAB in *SAP America* also narrowed the “technical invention” exception, by stating that one non-technological claim was enough to permit CBM review. *Id.*

⁹⁵ Lee, *supra* note 19. Although passed by the House, the bill never reached a vote in the Senate.

Instead of focusing on the issue of overbroad patents, the Innovation Act targeted the actor—the NPE. Its provisions made procedural changes in patent litigation, such as heightened pleading and cost-shifting, that aimed to discourage patent trolling behavior.⁹⁶ Since discouraging patent trolling behavior leaves the low quality, troll patents intact, the provisions of the Innovation Act would “treat the symptoms instead of the disease.”⁹⁷

B. *Alice Corp. v. CLS Bank*

The Supreme Court addressed the rise of NPE activity in *Alice Corp. v. CLS Bank*.⁹⁸ In 2007, CLS Bank filed a declaratory judgment action seeking a declaration of non-infringement, invalidity, and unenforceability of Alice’s patents.⁹⁹ Alice’s patented claims related to “computerized methods, computer-readable media, and systems that are useful for conducting financial transactions using a third party to settle obligation between a first and second party so as to mitigate ‘settlement risk,’” i.e., the risk that only one party will perform its obligations.¹⁰⁰ Ultimately, the Supreme Court held that Alice’s patent claims were drawn on the abstract idea of intermediated settlement, and implementing the abstract idea on generic computer hardware failed to transform it into a patent-eligible invention under section 101.¹⁰¹

Alice set forth a test for determining the eligibility of method claims. The Court relied on the two-step framework previously described in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*¹⁰² First, courts performing the test must ask whether the claims at issue are directed to subject matter excluded from section 101.¹⁰³ If the answer is yes, the Court must ask “[w]hat else is there in the claims”?¹⁰⁴

Klint Finley, *U.S. Senate Drives a Stake Through the Heart of Patent Reform*, WIRED (May 21, 2014, 8:53 PM), <http://www.wired.com/2014/05/rip-innovation-act/>.

⁹⁶ Timothy B. Lee, *Patent Reform Passes the House 325 to 91. Here’s What You Need to Know*, WASH. POST (Dec. 5, 2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/12/05/the-house-votes-on-patent-reform-today-heres-what-you-need-to-know/> (describing that pursuant to the Act, pleadings require specificity regarding the plaintiff’s principal line of business, the names of financially interested parties to the infringement suit, and each claim of each patent allegedly infringed and the acts contributing to the infringement). See also Innovation Act, H.R.3309, 113th Cong. (2013–2014).

⁹⁷ Lee, *supra* note 19.

⁹⁸ *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347 (2014).

⁹⁹ *Id.* at 2353. The patents at issue were U.S. Patents Nos. 5,970,470; 6,912,510; 7,149,720; and 7,725,375. *Id.* at n.1.

¹⁰⁰ Judge Lourie, *CLS Bank Intern v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1284 (2013); *Alice Corp.*, 134 S.Ct.at 2352.

¹⁰¹ *Alice Corp.*, 134 S.Ct. at 2352.

¹⁰² *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012). At issue in *Mayo* were patents directed to a method for measuring metabolite levels in the bloodstream in order to adjust the dosage of a drug for treatment of autoimmune diseases. *Id.*

¹⁰³ *Alice Corp.*, 134 S.Ct. at 2355.

¹⁰⁴ *Id.* (quoting *Mayo*, 132 S.Ct. at 1297).

Courts should look for an “inventive concept” by considering the elements of the claim both individually and as an ordered combination, and ultimately determine whether the additional elements “‘transform’ the claimed abstract idea into a patent-eligible application.”¹⁰⁵ Underlying the Court’s framework in *Alice* is the concern that the patent law should not improperly tie up future use of the building blocks of human ingenuity.¹⁰⁶

Quoting *Mayo* for support, Alice argued that the abstract ideas exception to section 101 patent eligible subject matter should only be applied to “preexisting, fundamental truth[s] [that] exis[t] in principle apart from any human action,” such as mathematical formulas.¹⁰⁷ However, the Court maintained that Alice’s patents were indistinguishable from the business method claims held invalid in *Bilski*.¹⁰⁸ The invalid patent claims in *Bilski* were directed to the concept of risk hedging, which is “not a ‘truth’ about the natural world ‘that has always existed,’ [but] a method of organizing human activity.”¹⁰⁹

After determining that Alice’s claims were directed to an abstract idea of intermediated settlement, the Court further concluded that the claims did not add an inventive concept sufficient to transform the abstract idea into a patent eligible invention, as it is not enough to take an aged-old method and apply it on a generic computer.¹¹⁰ On the other hand, specialized software that transforms a generic computer into a specialized machine may be patent eligible.¹¹¹ Without going so far as abolishing patent eligibility of business methods, and apart from rejecting the recitation of generic computer hardware in claims directed to abstract ideas, *Alice* offered few limiting principles.¹¹²

Post-*Alice*, defendants have increasingly sought invalidation of similar patents. As of September 2014, approximately three months after *Alice*, there were thirteen court rulings on the patentability of

¹⁰⁵ *Id.* at 2357 (quoting *Mayo*, 132 S.Ct. at 1294, 1298).

¹⁰⁶ *Alice Corp.*, 134 S.Ct. at 2354 (“We have ‘repeatedly emphasized this . . . concern that patent law not inhibit further discovery by improperly tying up the future use of’ these building blocks of human ingenuity.” (quoting *Mayo*, 132 S.Ct. at 1301)).

¹⁰⁷ *Id.* at 2356 (quoting *Mayo*, 132 S.Ct. at 1297).

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Alice Corp.*, 134 S.Ct. at 2357–58 (citing *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972), wherein the Court invalidated a patent that claimed an algorithm implemented on a general purpose digital computer).

¹¹¹ *Id.* at 2358 (citing *Diamond v. Diehr*, 450 U.S. 175 (1981), wherein the Court upheld a computer-implemented method for curing rubber as patent eligible, not because it was implemented on a computer, but because the method “improved an existing technological process . . .”).

¹¹² Justices Sotomayor, Ginsburg, and Breyer would have called for the end of business method and software patents, citing Judge Dyk that “[t]here is no suggestion in any of th[e] early [English] consideration of process patents that processes for organizing human activity were or ever have been patentable.” *Id.* at 2360 (Sotomayor, J., concurring).

software and business methods—all of the challenged patents had been deemed invalid.¹¹³ These patents include a telecommunications system for checking with a user before deciding whether to establish a new connection—the Delaware district court noted that human beings making phone calls could easily perform the steps, and ruled it invalid.¹¹⁴ A California district court struck down a patent covering the concept of using a computer network to ask people to do tasks, then wait for those tasks to be completed, noting again that people have long done this with telephones.¹¹⁵ Lower courts seem to have seized on the language in *Alice*, derived from *Bilski*, suggesting that methods of organizing human activity are ineligible for patenting and that tying computers to these methods does not render them sufficiently transformative to withstand section 101 analysis.¹¹⁶

The USPTO has also adhered strictly to the language in *Alice*, noting in its preliminary and interim instructions to the examining corps that “[e]xamples of abstract ideas referenced in *Alice Corp.* include . . . Certain methods of organizing human activities.”¹¹⁷ The USPTO has even withdrawn notices of allowance after receiving payments of issue fees for patents involving computer-implemented abstract ideas.¹¹⁸ Despite the USPTO’s examination guidelines, however, the allowance rate of financial services patents have not lessened for major players such as Bank of America, JPMorgan Chase Bank, and Wells Fargo Bank.¹¹⁹ Some of these post-*Alice* patented innovations cover mobile electronic technologies connecting bank customers to their accounts when paying for goods and services.¹²⁰ What then allows these patents to withstand patent examination post-*Alice* but not others? An answer may be found in the First Amendment.

¹¹³ Timothy B. Lee, *Software Patents Are Crumbling, Thanks to the Supreme Court*, VOX (Sept. 12, 2014), <http://www.vox.com/2014/9/12/6138483/software-patents-are-crumbling-thanks-to-the-supreme-court>.

¹¹⁴ *Id.* (quoting Comcast IP Holdings I, LLC v. Sprint Comm. Co. L.P., No. CV 12-205-RGA, 2014 WL 3542055 (D. Del. July 2014)).

¹¹⁵ *Id.* (quoting Eclipse IP LLC v. McKinley Equip. Corp., No. SACV 14-742-GW AJWX, 2014 WL 4407592 (C.D. Cal. Sept. 2014)).

¹¹⁶ *Id.* (“But now the courts are sending a pretty clear message: you can’t take a commonplace human activity, do it with a computer, and call that a patentable invention.”).

¹¹⁷ Memorandum from Deputy Comm’r For Patent Examination Policy Andrew H. Hirshfeld for Patent Examining Corps (June 25, 2014), available at http://www.uspto.gov/patents/announce/alice_pec_25jun2014.pdf. See also 2014 Interim Guidance on Patent Subject Matter Eligibility, 79 Fed. Reg. 74,618, 74,622 (Dec. 16, 2014) available at <http://www.gpo.gov/fdsys/pkg/FR-2014-12-16/pdf/2014-29414.pdf>.

¹¹⁸ Peggy Focarino, *Update on USPTO’s Implementation of ‘Alice v. CLS Bank’*, USPTO (Aug. 4, 2014), http://www.uspto.gov/blog/director/entry/update_on_uspto_s_implementation.

¹¹⁹ Steve Brachmann, *Big Banks Get Software Patents Despite Alice*, IP WATCHDOG (Sept. 19, 2014), <http://www.ipwatchdog.com/2014/09/19/big-banks-get-software-patents-despite-alice/id=51317/>.

¹²⁰ *Id.* See also U.S. Patent No. 8,805,740 (filed Mar. 27, 2013); U.S. Patent No. 8,800,857 (filed Sept. 26, 2007); U.S. Patent No. 8,811,711 (filed Jan. 1, 2012).

III. A FIRST AMENDMENT PRESCRIPTION

Without delving too deeply into the jurisprudence, the First Amendment of the Constitution protects, among other cherished values, activities characterized as “speech,” which turns on whether or not the activity is a form of expression.¹²¹ An activity is expressive if it conveys an idea.¹²² Additionally, an activity may merit protection “if it facilitates expression protected by the First Amendment.”¹²³ Thus, if an activity is communicative or if it facilitates expression, i.e., is “central to the development of a medium for the expression of ideas, then the court must engage in a comprehensive analysis of First Amendment values”¹²⁴ Certain methods of organizing human activity covered by overbroad BMPs should trigger First Amendment free speech analysis where they have the potential to restrict expressive activities.

While many consider the two areas of law unrelated, patent law and First Amendment free speech jurisprudence exist symbiotically.¹²⁵ Although more active in the field of copyright, free speech principles inform the scope of monopolies granted by both the Patent Act and the Copyright Act.¹²⁶ Some even contend that “[t]he presence of a limiting principle is more necessary in patent law than with respect to copyright” because a patent prevents full use by others of the knowledge contained in the patent, whereas a copyright only covers the particular expression of the knowledge.¹²⁷ This Note draws from the argument made by the American Civil Liberties Union (“ACLU”) in *Ass’n for Molecular Pathology v. Myriad Genetics* (“*Myriad*”),¹²⁸ as well as the Supreme Court’s language in *Alice*, to suggest that the First Amendment can

¹²¹ See Robert Plotkin, *Fighting Keywords: Translating the First Amendment to Protect Software Speech*, 2003 U. ILL. J.L. TECH. & POL’Y 329, 331 (2003).

¹²² *Id.* at 337. However, protected speech may sometimes involve both expressive and functional aspects, such as a picket line, which expresses and conveys a political idea while also performing the function of blocking a building or other structure. *Id.* at 337–38.

¹²³ *Id.* at 341.

¹²⁴ Jorge R. Roig, *Decoding the First Amendment*, 68 N.Y.U. ANN. SURV. AM. L. 319, 326 (2012).

¹²⁵ “*Mayo v. Prometheus* thus gives us an example of patents going too far, interfering with laws of nature and even the freedom to think. I would posit that those exceptions for patent law *are* the built-in mechanisms that protect the First Amendment. Patentable subject matter, then, serves First Amendment goals.” Elizabeth Townsend Gard, *Golan and Prometheus as Misfit First Amendment Cases?*, 2012 CATO SUP. CT. REV. 359, 390–91 (2011–2012).

¹²⁶ “The First Amendment operates to limit the scope of monopolies permitted by both the Patent Act and the Copyright Act.” HANNIBAL R. TRAVIS, CYBERSPACE LAW: CENSORSHIP AND REGULATION OF THE INTERNET 87 (2013); See generally *Eldred v. Ashcroft*, 537 U.S. 201, 219 (2003) (describing the interactions between copyright law, patent law and the First Amendment with regard to content regulation and the public domain, and distinguishing the two kinds of intellectual property).

¹²⁷ Brief of the Software Freedom Law Center as Amicus Curiae in Support of Respondent 2009, 12 available at <http://patentlyo.com/media/docs/2009/10/08-964-software-freedom-law-center.pdf> (quoting *Eldred*, 537 U.S. at 217).

¹²⁸ *Ass’n for Molecular Pathology v. Myriad Genetics*, 133 U.S. 1207 (2013) [hereinafter *Myriad*].

guide courts, the USPTO, and practitioners in determining which BMPs are valid inventions and which are overbroad abstract ideas that should be reserved for the public.

A. *The ACLU's First Amendment Argument in Myriad Genetics*

The First Amendment is arguably the closest constitutional protection of scientific innovation.¹²⁹ Patent law itself supports First Amendment principles through public disclosure of the invention.¹³⁰ If patent law and First Amendment operate together to preserve the right of the public to have access to scientific and technological information, then patent law can appropriately recruit First Amendment free speech principles to evaluate business method claims and review BMPs that may implicate free speech guarantees.

In *Myriad*, the ACLU attempted to invoke the novel argument that gene patents are unconstitutional under the First Amendment because they remove information from the public domain and limit inquiry into the patented genes.¹³¹ Essentially, the ACLU argued that the gene patents at issue covered mere thoughts regarding relationships between specific genetic mutations and diseases such that the patents impinged on the freedom of scientific inquiry and the free exchange of knowledge.¹³² The ACLU's argument in *Myriad* demonstrates that First Amendment principles rightly intersect patent law in section 101, defining patent-eligible subject matter and its exceptions.¹³³

¹²⁹ U.S. CONST. art. I, § 8, cl. 8. "The closest the Constitution comes to protecting scientific freedoms are the First Amendment's guarantees of freedom of 'speech' and 'press,'" as scientific research and innovation involve the process of "gathering, analyzing, and disseminating information and ideas that generally has important communicative and noncommunicative aspects . . ." Barry P. McDonald, *Government Regulation or Other "Abridgments" of Scientific Research: The Proper Scope of Judicial Review Under the First Amendment*, 54 EMORY L. J. 979, 980, 984–85 (2005).

¹³⁰ See Kauble, *supra* note 23, at 1155 (stating that patent law "can be seen as furthering [First Amendment] rights because patents over new inventions force new information into the public domain through disclosure").

¹³¹ See generally Complaint, Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office, 702 F. Supp. 2d 181 (2012) (No. 09 Civ. 4515) [hereinafter *Myriad Complaint*]; Kauble, *supra* note 23, at 1154–55.

¹³² The ACLU argued in *Myriad* that the USPTO's grant of the gene patents violated the First Amendment in two ways: "(1) they limit scientific researchers' rights to gather information and have a chilling effect on research . . . and (2) the patents limit the general public's right to have access to information about their own bodies--be it through genetic testing or doctors' ability to examine genetic test results." Kauble, *supra* note 23 at 1137. See generally *Myriad Complaint*, *supra* note 131. The ACLU in *Myriad* brought to light the issue of whether "freedom of scientific inquiry and the free exchange of knowledge and ideas" are, in fact, hampered by the grant of a limited monopoly under the Intellectual Property Clause. *BRCA FAQs*, ACLU (May 27, 2009), <https://www.aclu.org/free-speech/brca-faqs>.

¹³³ 35 U.S.C. § 101. See also Brief for Petitioners at 55, Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013) (No. 12-398), 2013 WL 353961 ("The First Amendment limits the reach of the intellectual property laws.").

B. *Relevant First Amendment Free Speech Theories*

The First Amendment creates the right to freedom of speech and protects against state censorship.¹³⁴ After determining that a government restriction involves protected speech, First Amendment analysis asks whether or not the restriction impermissibly limits speech and freedom of expression. Laws and other government-sanctioned impositions, such as patents, can violate the First Amendment in two ways: by restricting either expressive content or the time, place, or manner of the expression.¹³⁵ The former restriction demands strict scrutiny review, while the latter is subject to intermediate scrutiny review.¹³⁶

The Supreme Court has emphasized that the First Amendment serves to protect works that are “genuinely serious literary, artistic, political, or scientific expression”¹³⁷ that further truth, democracy, and autonomy.¹³⁸ The values underlying most speech fall under three general theories justifying First Amendment protection.¹³⁹ One theory values speech in the “marketplace of ideas” where “free trade in ideas” and open, unfettered dialogue encourages ideas to compete like goods in the marketplace.¹⁴⁰ Another theory values “democratic legitimation” and the production of an informed citizenry through free communication about political and social issues.¹⁴¹ Finally, a third theory values freedom of speech not as a fundamental social good, but instead as a means for individuals to exercise personal autonomy.¹⁴²

The marketplace of ideas theory promotes the unrestricted exchange of views and opinions in order to expose truth for the benefit

¹³⁴ U.S. CONST. amend. I (“Congress shall make no law . . . abridging the freedom of speech, or the press.”).

¹³⁵ Kevin Francis O’Neill, *A First Amendment Compass: Navigating the Speech Clause With a Five-Step Analytical Framework*, 29 SW. U. L. REV. 223, 226–27 (2000) (“When the government regulates speech, it does so in one of two ways: (1) by restricting expressive content, or (2) by restricting the time, place, or manner of its expression.”). The latter restriction is also known as a “content neutral” restriction, and the controlling factor in determining content neutrality “is the government’s purpose or intent.” *Id.* at 227.

¹³⁶ *Id.* Strict scrutiny is a higher standard of judicial review than intermediate scrutiny, such that its application “is almost always fatal to the challenged restriction.” *Id.* at 238–39. *See infra* Part III.C.

¹³⁷ *Miller v. California*, 413 U.S. 15, 23 (1973).

¹³⁸ Roig, *supra* note 124, at 350. The idea is the First Amendment does not extend to all forms of speech, but only those that implicate constitutional values, which include “(1) the creation of new knowledge [also known as the marketplace of ideas theory]; (2) individual autonomy; and (3) democratic self-government.” Robert Post, *Participatory Democracy and Free Speech*, 97 VA. L. REV. 477, 478 (2011).

¹³⁹ Note that several theories have been articulated to justify First Amendment protections, including the search for truth, maintenance of a healthy democracy, freedom of individual autonomy, sense of community, but this Note focuses on three theories that are particularly distinct and applicable to the patent law.

¹⁴⁰ Roig, *supra* note 124, at 350–51 (quoting *Abrams v. United States*, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting)).

¹⁴¹ *Id.* at 352–53.

¹⁴² *Id.* at 354–55.

of society by allowing the public to challenge and question the speech.¹⁴³ This theory suggests that the First Amendment protects the right of the public to disseminate information and emphasizes the right of the public to access¹⁴⁴ and know such information.¹⁴⁵ Overbroad BMPs directed at methods regarding the time, place, or manner of expression may restrict the public's rights to disseminate, and know or access information since the BMP removes from the public domain modes of speech exchange.¹⁴⁶

Like the marketplace of ideas theory, the democratic legitimation theory also requires the free flow of information so that the public may make informed decisions¹⁴⁷ and advance democratic principles.¹⁴⁸ The doctrine of commercial speech furthers the value of informed decision-making, giving businesses the right to disseminate information too.¹⁴⁹ Societal interest in the free flow of commercial information is so strong that the First Amendment protects commercial speech even where the speech only communicates: "I will sell you the X prescription drug at the Y price."¹⁵⁰ Thus, overbroad BMPs may restrict modes of

¹⁴³ Todd G. Hartman, *The Marketplace vs. The Ideas: the First Amendment Challenges to Internet Commerce*, 12 HARV. J.L. & TECH. 419, 427 (1999). In *Abrams v. United States*, Justice Holmes explained the marketplace of ideas theory, stating:

[W]hen men have realized that time has upset many fighting faiths, they may come to believe ... that the ultimate good desired is better reached by free trade in ideas—that the best test of truth is the power of the thought to get itself accepted in the competition of the market That at any rate is the theory of our Constitution.

Abrams v. United States, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting).

¹⁴⁴ See *ACLU v. Reno*, 929 F.Supp. 824, 854 (E.D. Penn. 1996) (reasoning that "adults have a constitutional right to access" material posted online), *aff'd*, *Reno v. ACLU*, 521 U.S. 844 (1997).

¹⁴⁵ "The public's right to know is the philosophical basis of many statutes that force government entities to provide documents on request or allow the public into meetings." Malla Pollack, *The Right to Know?: Delimiting Database Protection at the Juncture of the Commerce Clause, the Intellectual Property Clause, and the First Amendment*, 17 CARDOZO ARTS & ENT. L.J. 47, 70 (1999).

¹⁴⁶ See generally Kauble, *supra* note 23, at 1160 (discussing how some gene patents undermine the marketplace of ideas theory when "the ability to study and think further about a gene is simply precluded" because of the patent).

¹⁴⁷ Post, *supra* note 138, at 482 (Democratic legitimation "requires that citizens have access to the public sphere so that they can participate in the formation of public opinion, and it requires that governmental decision making be somehow rendered accountable to public opinion.").

¹⁴⁸ The "[d]emocratic theory categorizes as 'speech' those speech acts and media of communication that are socially regarded as necessary and proper means of participating in the formation of public opinion." *Id.* at 483. The Supreme Court has recognized that "[t]he right of citizens to inquire, to hear, to speak, and to use information to reach consensus is a precondition to enlightened self-government and a necessary means to protect it. The First Amendment 'has its fullest and most urgent application' to speech uttered during campaign for political office." *Citizens United v. FEC*, 558 U.S. 310, 349 (2010). Additionally, James Madison declared that "[a] popular government without popular information [] or the means of acquiring it is but a prologue to a farce or a tragedy or perhaps both." Pollack, *supra* note 145, at 67. See generally Kauble, *supra* note 23, at 1160–61.

¹⁴⁹ See Kauble, *supra* note 23, at 1161–62 (noting, however, that a business's "right to disseminate information was tied to the public's need to receive such commercial information").

¹⁵⁰ *Virginia State Bd. of Pharmacy v. Virginia Citizens Consumer Council, Inc.*, 425 U.S. 748, 761 (1976) (holding that a state restriction on the dissemination of truthful and accurate

commercial communication.¹⁵¹

Finally, the personal autonomy theory also promotes free exchange of ideas, but emphasizes an individual's right to self-fulfillment through expression.¹⁵² Although the democratic legitimation theory assumes that individuals engaging in public discourse are autonomous such that self-governance depends on personal autonomy, which in turn requires the free flow of information,¹⁵³ the personal autonomy theory also stands on its own. Outside of the democracy context, the personal autonomy theory promotes the right of individuals to express themselves. By restricting modes of communicative expression, such as by reading on a particular method for facilitating expression, overbroad BMPs may limit individuals' First Amendment rights to exercise free expression.

C. First Amendment Free Speech Analysis

Unlike the ACLU's position in *Myriad*, stating that all gene patents are *prima facie* unconstitutional and should not be granted,¹⁵⁴ this Note does not propose to bar issuance of all BMPs on First Amendment free speech grounds. Instead, this Note suggests that courts, the USPTO, and patent practitioners may use free speech analysis in determining whether or not the BMP is so broad that it is ineligible under section 101. Indeed, in the software and Internet industries, free speech and freedom of expression are of high concern,¹⁵⁵ so that patents granted in these industries—predominantly BMPs¹⁵⁶—implicate that same level of concern.

Whether or not a BMP violates the First Amendment right to freedom of expression depends on the characterization of its claims. Free speech analysis proceeds from a determination of the claims as representing either a content-based restriction or a content-neutral restriction. Content-based restrictions limit the expression because of its

information regarding a lawful activity is unconstitutional).

¹⁵¹ See generally Kauble, *supra* note 23, at 1161–63 (discussing how some gene patents restrict the public's right “to access information regarding their own bodies”).

¹⁵² See Roig, *supra* note 124, at 354 (explaining that another value underlying the First Amendment is the protection of “individual's interest in self-expression. Freedom of speech helps make men free to develop their faculties, it respects their dignity and choice, and it facilitates the value of individual self-realization.”) (quoting *Citizens United v. FEC*, 558 U.S. 310, 349 (2010) (Stevens, J., concurring) (citations omitted) (internal quotations omitted)).

¹⁵³ See Post, *supra* note 138, at 483 (“Within public discourse, therefore, persons should be regarded as autonomous But because the source of this autonomy is political, rather than ethical, persons outside public discourse are not necessarily regarded as autonomous.”).

¹⁵⁴ Kauble, *supra* note 23, at 1164; see also Brief for Petitioners, *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, *supra* note 133, at 55–56 (arguing that “[p]atent claims on isolated DNA also violate the First Amendment because they amount to a grant of exclusive control over a body of knowledge”).

¹⁵⁵ See generally *United States v. Am. Library Ass'n, Inc.*, 539 U.S. 194 (2003); *Ashcroft v. ACLU*, 535 U.S. 564 (2002); *Reno v. ACLU*, 521 U.S. 844 (1997); Dan L. Burk, *Patenting Speech*, 79 TEX. L. REV. 99 (2000).

¹⁵⁶ See FTC, PROPER BALANCE, *supra* note 23, ch. 3, at 44.

message,¹⁵⁷ while content-neutral restrictions limit the availability and means of communication.¹⁵⁸ Strict scrutiny review of content-based restrictions¹⁵⁹ requires a showing that: “[1] the restriction furthers a compelling government interest and [2] that it is narrowly tailored to achieve that interest.”¹⁶⁰ Content-neutral restrictions warrant intermediate scrutiny review,¹⁶¹ and require a showing that: (1) the restriction “furthers an important or substantial governmental interest”, (2) “the governmental interest is unrelated to the suppression of free expression”, and (3) the incidental restriction on alleged First Amendment freedoms is no greater than is essential to the furtherance of that interest.”¹⁶²

Some commentators have argued that BMPs covering software represent content-based restrictions because they remove from the public domain dialogue between speaker and audience in mathematics and computer science, and hinder innovation in those fields.¹⁶³

¹⁵⁷ Geoffrey R. Stone, *Content Regulation and the First Amendment*, 25 WM. & MARY L. REV. 189, 196 (1983) (discussing the “speech-protective analysis” of content-based restriction and quoting *Police Dep’t v. Mosley*, 408 U.S. 92 (1972), “that above all else, the First Amendment means that government has no power to restrict expression because of its message, its ideas, its subject matter, or its content” (internal quotation marks omitted)).

¹⁵⁸ *Id.* at 192–93 (“The Court’s primary concern in the content-neutral realm is that such restrictions, by limiting the availability of particular means of communication, can significantly impair the ability of individuals to communicate their views to others.”). Examples of content-neutral restrictions are those “[l]aws that prohibit noisy speeches near a hospital, ban billboards in residential communities, impose license fees for parades and demonstrations, or forbid the distribution of leaflets in public places.” *Id.* at 189–90.

¹⁵⁹ *Kauble*, *supra* note 23, at 1165 (stating that “[c]ontent-based restrictions on speech warrant the use of strict scrutiny to determine if they are unacceptable limitations on the marketplace of ideas and thus prohibited under the Constitution”). See *Burson v. Freeman*, 504 U.S. 191, 197 (1992) (holding that a content-based restriction in a public forum must be subjected to strict scrutiny since the “Court has held that the First Amendment’s hostility to content-based regulations extends not only to a restriction on a particular view point, but also to a prohibition of public discussion of an entire topic.”).

¹⁶⁰ *Citizens United v. FEC*, 558 U.S. 310, 312 (2010).

¹⁶¹ *Roig*, *supra* note 124, at 335 (stating that “intermediate review applies whenever the government regulates in a content-neutral fashion the non-communicative aspects of any activity”).

¹⁶² *Turner Broadcasting Sys., Inc. v. FCC*, 512 U.S. 622, 662 (quoting *United States v. O’Brien*, 391 U.S. 367, 377 (1968)). See also *Ward v. Rock Against Racism*, 491 U.S. 781, 791 (1989) (quoting *Clark v. Cmty. For Creative Non-Violence*, 468 U.S. 288, 293 (1984)). Note that the narrow tailoring element of the third prong “requires, in other words, that the means chosen do not ‘burden substantially more speech than is necessary to further the government’s legitimate interests.’” 512 U.S. at 662 (quoting *Ward*, 491 U.S., at 799). Note additionally that various tests exist for intermediate review in First Amendment free speech jurisprudence, but that the *Turner* decision “represents a crucial step in the creation of an overarching intermediate scrutiny standard in First Amendment Law.” Ashutosh Bhagwat, *The Test That Ate Everything: Intermediate Scrutiny in First Amendment Jurisprudence*, 2007 U. ILL. L. REV. 783, 793 (2007).

¹⁶³ See Lee Tien, *Publishing Software as a Speech Act*, 15 BERKELEY TECH. L.J. 629, 664–65 (2000) (discussing the role of software and source code as speech in scientific discourse where programmers build off of each other’s procedures and algorithms at one level, and at another level contribute to a larger class of algorithms addressed to a certain set of problems). The argument is that software counts as speech just like other expressive acts such as choreography

Proponents of this view reason that computer code itself is language understandable to humans so that there “is no meaningful difference between computer language . . . and German or French.”¹⁶⁴ Because the current patent law does not require disclosure of source code to receive a patent, however, it is more likely that overbroad BMPs fall into the content-neutral category.

Validity of content-neutral restrictions depends on the extent to which the restriction limits opportunities to engage in free expression.¹⁶⁵ In determining the effect of content-neutral restrictions, the Supreme Court has considered two factors: the extent to which the restriction limits the total quantity of expression, and the extent to which the restriction “limits important opportunities for the free expression of particular groups, individuals, or causes.”¹⁶⁶ Since individuals may simply employ another means, some argue that a restriction on a particular means of expression is unlikely to decrease the overall quantity of communication.¹⁶⁷ However, the nature of the digital domain—still nascent, rapidly developing, and marked by lock-ins and network effects—suggests that an overbroad BMP could in fact abridge a significant proportion of expression online.¹⁶⁸ Additionally, BMPs covering means of expression are likely used by certain groups of speakers (such as young people, users of social-networking websites, bloggers, etc.), or for certain purposes so that something is inevitably lost in transition from one means to another.¹⁶⁹

Like laws restricting a particular means of expression, such as leafleting,¹⁷⁰ door-to-door solicitation,¹⁷¹ billboards,¹⁷² and signs on public utility poles,¹⁷³ overbroad BMPs covering such modes as one-

and musical scores, which enable a person to do something, and that functional characteristics should not remove software from First Amendment protection. *See id.* at 692–94.

¹⁶⁴ Burk, *supra* note 155, at 107 (quoting *Berstein v. U.S. Dep’t. of State*, 922 F. Supp. 1426, 1434–35 (N.D. Cal. 1996)). “Computer software is typically written in a high-level computer language that is easily manipulated by humans; this source code is then compiled into machine-readable object code that the machine can execute.” *Id.* at 116.

¹⁶⁵ Geoffrey R. Stone, *Content-Neutral Restrictions*, 54 U. CHI. L. REV. 46, 59 (1987).

¹⁶⁶ *Id.* at 59 (“[T]he Court considers two separate but related factors: the extent to which the challenged restriction reduces the total quantity of public debate, and the extent to which the challenged restriction limits important opportunities for the free expression of particular groups, individuals, or causes.”).

¹⁶⁷ *Id.* at 65.

¹⁶⁸ *See* Dreyfuss, *supra* note 47, at 271–72 (explaining the “stickiness” of overbroad BMPs to end users through lock-ins, as with the Amazon 1-click patent, and network effects, as with AOL’s instant messenger). *See also* Jim Hu, *Patent Creates IM Wrinkle*, CNET (Dec. 17, 2002), <http://news.cnet.com/2100-1023-978234.html>.

¹⁶⁹ Stone, *supra* note 165, at 65–66.

¹⁷⁰ *Schneider v. New Jersey*, 308 U.S. 147 (1939).

¹⁷¹ *Martin v. City of Struthers*, 319 U.S. 141 (1943).

¹⁷² *Metromedia, Inc. v. City of San Diego*, 453 U.S. 490 (1981).

¹⁷³ *Members of the City Council of Los Angeles v. Taxpayers for Vincent*, 466 U.S. 789 (1984).

click shopping,¹⁷⁴ online shopping carts,¹⁷⁵ the hyperlink,¹⁷⁶ video streaming,¹⁷⁷ targeted banner ads,¹⁷⁸ and paying with a credit card online,¹⁷⁹ potentially reach far into the First Amendment realm of expression in the digital domain. Thus, First Amendment analysis is not only appropriate, but necessary.

D. Applications of First Amendment

Business method patents cover technologies beyond financial services, and even beyond those assigned to the USPTO's Class 705, which is the generic class encompassing machines and their corresponding methods for data processing and calculation.¹⁸⁰ As individuals conduct more of their lives online, applying First Amendment free speech analysis to overbroad BMPs would help ensure that patent law remains clear and stable.¹⁸¹ This is because the application of First Amendment free speech principles further helps to protect the balance between the inventor's rights and the public's rights.¹⁸² The following examples illustrate that the proper focus should be on the patent, not the patent holder.

1. Amazon.com's 1-Click Patent

Amazon.com is not a troll. It is "a behemoth of American business."¹⁸³ "Irrevocably linked to technology" and marked by "ceaseless innovation," Amazon.com has integrated itself into the lives of Americans like no other retail company.¹⁸⁴ This makes its possession of the "1-click" patent especially troublesome.¹⁸⁵ Filed in USPTO business methods class 705, the "1-click" patent is directed to a method "for 'single action' ordering of items in a client/server environment such as the Internet."¹⁸⁶ Essentially, the 1-click patent protects

¹⁷⁴ U.S. Patent No. 5,960,411 (filed Sept. 12, 1997).

¹⁷⁵ U.S. Patent No. 5,715,314 (filed Oct. 12, 1994).

¹⁷⁶ U.S. Patent No. 4,873,662 (filed Aug. 15, 1980).

¹⁷⁷ U.S. Patent No. 5,132,992 (filed Jan. 7, 1991).

¹⁷⁸ U.S. Patent No. 6,026,368 (filed July 17, 1995).

¹⁷⁹ U.S. Patent No. 6,289,319 (filed Nov. 30, 1994).

¹⁸⁰ See TRAVIS, *supra* note 126, at 80 (stating "five classes most relevant to business methods, e-commerce, and the Internet (Classes 705, 707, 708, 709, 710, and 902)"). See also *BMP Litigation Investigation*, *supra* note 78.

¹⁸¹ See Justice Stevens' concurrence in *Bilski v. Kappos*, 561 U.S. 593, 613 (2010) (Stevens, J., concurring) ("In the area of patents, it is especially important that the law remain clear and stable.").

¹⁸² See generally Kauble, *supra* note 23, at 1145 (discussing the necessity of a First Amendment lens to exclude gene patents under § 101).

¹⁸³ Christopher Matthews, *Will Amazon Take Over the World?*, TIME (July 16, 2012), <http://business.time.com/2012/07/16/will-amazon-take-over-the-world/>.

¹⁸⁴ *Id.*

¹⁸⁵ U.S. Patent No. 5,960,411 (filed Sept. 12, 1997).

¹⁸⁶ *Id.* See also *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1347 (2001).

Amazon's method of allowing registered customers to make purchases with just one mouse click.

Many believe the 1-click BMP is impermissibly overbroad.¹⁸⁷ Applying First Amendment free speech analysis to the 1-click BMP, the court or USPTO would begin by characterizing the claims. As stated above, the 1-click patent covers a method of online purchasing, so that the patent does not impose a restriction on content but on a means of expression through the purchase of goods.¹⁸⁸ Because a court would most likely find the BMP to represent a content-neutral restriction, it would decide whether (1) issuing the patent furthers a substantial governmental interest; (2) the patent is unrelated to the suppression of free expression; and (3) the restriction does not burden substantially more speech than necessary to achieve that interest.¹⁸⁹

First, a proposed interest in issuing the patent is the interest in encouraging innovation and recognizing personal intellectual property rights as mandated by the Constitution. Some scholars have asserted that the promotion of innovation qualifies as a substantial government interest,¹⁹⁰ so that the assumption for the purposes of this Section is that the patent grant itself satisfies the first prong of the free speech analysis. Further, all patents, through their disclosure, should promote innovation by contributing to the public storehouse of knowledge and the marketplace of ideas, which satisfies the second prong of the free speech analysis. However, "99 percent of . . . business method inventions are automated techniques for doing something that people used to do in a nonautomated way"¹⁹¹ such that these patents fail the third prong of the analysis. The 1-click patent, which allows online shoppers to make purchases without having to re-enter billing and shipping information (using web cookies), is an example of an automated way of doing something long performed in a nonautomated way—imagine swiping a credit card at a brick and mortar store. The 1-click patent, therefore, burdens more speech than is necessary to achieve the interest in promoting innovation since online businesses are

¹⁸⁷ See Tim O'Reilly, *Email to Jeff Bezos: Amazon 1-Click Patent*, O'REILLY (Jan. 5, 2000), http://oreilly.com/pub/a/oreilly/ask_tim/2000/amazon_patent.html (describing the grant of the 1-click patent as "pissing in the well").

¹⁸⁸ See *Citizens United v. FEC*, 558 U.S. 310, 351 (2010) ("All speakers, including individuals and the media, use money amassed from the economic marketplace to fund their speech. The First Amendment protects the resulting speech, even if it was enabled by economic transactions with persons or entities who disagree with the speaker's ideas.").

¹⁸⁹ *Turner*, 512 U.S. at 662.

¹⁹⁰ Kauble, *supra* note 23, at 1166–67 (citing Jason Schultz and Corynne McSherry, attorneys for the Electronic Frontier Foundation, who argue that "the Intellectual Property Clause [of the Constitution] supports a compelling government interest in *promoting innovation*." Jason Schultz & Corynne McSherry, *Patent Injunctions and Speech Technologies* 11 (unpublished working paper), available at https://www.law.berkeley.edu/files/Schultz_McSherry2.doc).

¹⁹¹ FTC, PROPER BALANCE, *supra* note 23, ch. 4, at 38.

incentivized to improve efficiency and user experience regardless of patentability.

Narrow tailoring to tilt the balance more toward promotion of innovation under the third prong would require Amazon to amend its patent claims. In fact, following a petition for ex parte re-examination of the 1-click patent, the USPTO ultimately did require Amazon to amend its claims, though the amendments were slight.¹⁹² The Australian Patent Office, too, required Amazon to narrow its patent claims to cover the use of the cookie technology.¹⁹³ Meanwhile, the European Patent Office rejected Amazon's 1-click patent altogether.¹⁹⁴

2. Ultramercial v. Hulu

Despite being labeled a “troll,” Ultramercial LLC operates in the field of online advertising, particularly specializing in interactive web advertisements,¹⁹⁵ and has held a patent relating to one such advertising model.¹⁹⁶ In 2011, the Federal Circuit was first faced with the question of whether or not Ultramercial's patent was too abstract so as to run afoul of section 101 in *Ultramercial, LLC v. Hulu*.¹⁹⁷ The patent at issue related to a “Method and System for Payment of Intellectual Property Royalties by Interposed Sponsor on Behalf of Consumer over A Telecommunications Network.”¹⁹⁸ Classified as a BMP, the Ultramercial patent claimed a process for viewing ads online before accessing copyrighted content such as a movie or television program.¹⁹⁹ The Ultramercial patent read on an exchange over the Internet wherein a user receives a copyrighted product for free by viewing an advertisement paid for by the advertiser.²⁰⁰

Because the Ultramercial patent covered a method of advertising,

¹⁹² Eric Engleman, *Amazon.com's 1-Click Patent Confirmed Following Re-Exam*, BIZJOURNALS (Mar. 10, 2010), http://www.bizjournals.com/seattle/blog/techflash/2010/03/amazons_1-click_patent_confirmed_following_re-exam.html?page=all.

¹⁹³ Nik Ramchand & Timothy Creek, *Telstra Successfully Narrows Amazon's "1-Click" Ordering Patent Application in Australia*, DAVIES COLLISON CAVE (May 11, 2011), <http://www.davies.com.au/pub/detail/444/telstra-successfully-narrows-amazon-s-1-click-ordering-patent-application-in-australia>.

¹⁹⁴ Tim Worstall, *Amazon Loses 1-Click Patent*, FORBES (July 7, 2011, 10:18 AM), <http://www.forbes.com/sites/timworstall/2011/07/07/amazon-loses-1-click-patent/>.

¹⁹⁵ *What is Ultramercial?*, ULTRAMERCIAL.COM, http://www.ultramercial.com/index_flash.html#overview (last visited Apr. 27, 2015).

¹⁹⁶ U.S. Patent No. 7,346,545 (filed May 29, 2001) (covering a consumer's choice to receive copyrighted intellectual property, without paying royalties by “interacting with an interposed sponsor's or advertiser's message, wherein the interposed sponsor or advertiser may pay [for] . . . the underlying intellectual property” associated).

¹⁹⁷ *Ultramercial, LLC v. Hulu, LLC*, 657 F.3d 1323 (Fed. Cir. 2011).

¹⁹⁸ U.S. Patent No. 7,346,545, *supra* note 196.

¹⁹⁹ *Id.*

²⁰⁰ Courtenay C. Brinkerhoff, *Judge Rader Explains 35 USC 101 in Ultramercial v Hulu*, PHARMAPATENTSBLOG (June 24, 2013), <http://www.pharmapatentsblog.com/2013/06/24/judge-rader-explains-35-usc-101-in-ultramercial-v-hulu/>.

it represents a content-neutral restriction on a means of expression.²⁰¹ Applying free speech analysis to the Ultramercial patent, the government would advance the interest in promoting innovation, which is unrelated to the suppression of free expression. Assuming the patent disclosure was specific enough to advance that interest, the government would still have to satisfy the third prong and demonstrate that the patent would not burden substantially more speech than necessary. Because the Ultramercial patent has the effect of restricting the “age-old idea that advertising can serve as currency,”²⁰² Ultramercial could have restricted a significant quantity of advertising over the Internet.²⁰³ In fact, assertion of the Ultramercial patent could potentially thwart parties on all sides of the advertising arrangement. Online content providers’ right to disseminate information into the marketplace of ideas could be limited if most consumers do not want to pay or pay in advance for the content they seek to view. Consumers’ right to not only receive commercial information via the advertising model and make fully informed decisions, but also their right to access the copyrighted content would be limited. Finally, advertisers’ right as autonomous entities to exercise free expression in the field of streaming content could be limited if few other online advertising models exist.²⁰⁴

Ultimately, in November 2014, the Federal Circuit applying *Alice* struck down the Ultramercial patent after years of litigation.²⁰⁵ The Federal Circuit determined that the patent covered an abstraction, which was not transformed into patent eligible subject matter by implementing the idea of using advertising as currency on the Internet.²⁰⁶ The Federal

²⁰¹ Note that in *Virginia State Bd. of Pharmacy v. Virginia Citizens Consumer Council*, the Supreme Court decided the question of whether there is an exception to First Amendment protection for commercial speech such as advertising, and held that “commercial speech, like other varieties, is protected.” See *Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, Inc.*, 425 U.S. 748, 770 (1976).

²⁰² Brief of Public Knowledge as Amicus Curiae In Support of Petitioner at 5, *WildTangent, Inc. v. Ultramercial, LLC*, 134 S.Ct. 2870 (2014) (No. 13-255).

²⁰³ Ultramercial in fact sued Hulu and YouTube, widely known content video systems, for infringing its patent for showing viewers commercials in lieu of charging viewers for the copyrighted material. Timothy B. Lee, *One of the Worst Patents Ever Just Got Upheld in Court*, WASH. POST (June 24, 2013), <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/06/24/one-of-the-worst-patents-ever-just-got-upheld-in-court/>.

²⁰⁴ “For example, a method patent covering a particular piece of advertising provides just as much, if not more, control over subsequent distribution of the underlying message than a copyright over the same advertisement; and a software patent can provide much greater control than a software copyright.” Tun-Jen Chiang, *Rehabilitating the Property Theory of Copyright’s First Amendment Exemption*, 89 NOTRE DAME L. REV. 521, 574 (2013). See also *supra* Part III.B.

²⁰⁵ Daniel Nazer, *Victory! Court Finally Throws Out Ultramercial’s Infamous Patent on Advertising on the Internet*, EFF (November 14, 2014), <https://www.eff.org/deeplinks/2014/11/victory-court-finally-throws-out-ultramercials-infamous-patent-advertising> (“On September 9, 2009, a patent troll called Ultramercial sued a bunch of Internet companies alleging infringement of U.S. Patent 7,346,545.”).

²⁰⁶ *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014).

Circuit further stated that the Internet “is a ubiquitous information-transmitting medium, not a novel machine,” signaling the appropriateness of free speech analysis to BMPs.²⁰⁷

3. The Facebook “Like”

The Facebook “Like” is a concept that millions are familiar with. The “Like” button appears on a Facebook page and takes the form of a thumbs-up.²⁰⁸ It is widely known that giving a thumbs-up is a gesture of approval.²⁰⁹ Clicking the “Like” button serves as a means to disseminate users’ expression of approval on pages throughout the social-networking website.²¹⁰ The “Like” generates a sequence of events conveying a message of support for the expressions displayed on the “Liked” page, such that a patent over the feature would represent a restriction on the means of communicating approval on the website. In addition, a 3-judge appellate panel for the Fourth Circuit recently and unanimously held that a Facebook “Like” constitutes substantive speech that may be protected under the First Amendment.²¹¹ Thus, a patent over the “Like” may also represent a content-based restriction.²¹² Assertion of a broad patent covering the “Like” would mean not only that users might be limited in the means available to express approval virtually, despite having the ability to gesture approval in the physical world, but also that users might be restricted from communicating a message of support or enjoyment.

²⁰⁷ *Id.* at 716–17.

²⁰⁸ Ben Patterson, *What Happens When You “Like” Something on Facebook?*, HERE’S THE THING (July 1, 2011, 1:36 PM), <http://heresthethingblog.com/2011/07/01/facebook/>. Facebook pages, as distinct from Facebook profiles (“which are designed for individuals to represent their identity”), “are designed primarily for businesses, brands, sports teams, musical groups, and organizations – including religious groups and political campaigns – to share their stories and connect with Facebook users.” Brief of Facebook, Inc. as Amicus Curiae in Support of Plaintiff-Appellant Daniel Ray Carter, Jr. and in Support of Vacatur at 4, *Bland v. Roberts*, 857 F. Supp. 2d 599 (E.D. Va. 2012) (No. 12-16771) [hereinafter Facebook Brief].

²⁰⁹ Ira P. Robbins, *What is the Meaning of “Like”?: The First Amendment Implications of Social-Media Expression*, 7 FED. COURTS. L. REV. 127, 146 (June 2013) (stating that the “Like” button is “a commonly recognized and universally understood gesture that usually conveys a message” of approval).

²¹⁰ *Id.* at 144 (citing Facebook Brief, *supra* note 208, that clicking the “Like” button “generates posts on the Liked Page, on the user’s Timeline, and in the user’s biographical information, as well as in other users’ News Feeds”).

²¹¹ *Bland v. Roberts*, 730 F.3d 368, 386 (4th Cir. 2013) (holding that “liking a political candidate’s campaign page communicates the user’s approval of the candidate and supports the campaign by associating the user with it.”). The Fourth Circuit held “that a user may use a single mouse click to produce the message that he likes the page instead of typing the same message with several individual key strokes is of no constitutional significance.” *Id.*

²¹² Robbins, *supra* note 209, at 144–46 (explaining that a “Like” is itself a communicative expression understood by those who encounter it, and appropriately considered pure speech). The “Like” is also arguably symbolic speech as “[t]he act of clicking Like is ‘sufficiently imbued with elements of communication’ because the user intends to convey a message, and there is a great likelihood that the message will be understood by its viewers.” *Id.* at 145 (quoting *Spence v. State of Wash.*, 418 U.S. 405, 409 (1974)).

While Facebook does not hold a patent to the ubiquitous “Like,” two patents issued to Joannes Jozef Everardus Van Der Meer—the ‘362 and ‘316 patents—which are now held by a patent holding company, Rembrandt Social Media.²¹³ Rembrandt has claimed rights over the feature.²¹⁴ The ‘316 patent generally covers a method of organizing and displaying information on a “personal diary” webpage where diary content is gathered or created by the user.²¹⁵ The ‘362 patent generally covers a system for requesting certain data from a third party content provider and, over a communications link, transferring the data to be used to construct the user’s personal diary webpage.²¹⁶

A successful assertion of the Van Der Meer patents would have the potential not only to restrict a means of conveying and propagating any “diary information” on a website, but also to chill the accompanying content data. Because it is arguably overbroad, the Van der Meer patent may read on the “Like” and chill both the means of expression and content contained within a “Like” for the over half a billion Facebook users.²¹⁷

Applying the less-demanding test for content-neutral restrictions, the Van der Meer patents advance innovation beyond mere disclosure by inducing developers to innovate other ways of conveying expressions virtually. However, the Van der Meer patents do not explicitly and particularly cover a “Like” (a click that propagates a message of approval from one user to the webpages of other users particularly associated through a social-networking website), but generally a “method . . . to create a ‘diary’ containing multimedia references to contents of Websites.”²¹⁸ Considering the third prong of the analysis in assessing the extent to which the restriction burdens free expression, the Van der Meer patents limit a significant quantity of expression (the half billion Facebook users and countless others who employ a similar means for virtually conveying approval), and also limit the expressive opportunities of certain groups (social-networking users,

²¹³ U.S. Patent No. 6,289,362 (filed Sept. 1, 1998) and U.S. Patent No. 6,415,316 (filed Sept. 1, 1998). See also Joe Mullin, *Before There was Facebook There was “Surfbook”—Now Pay Up*, ARS TECHNICA (Feb. 7, 2013), <http://arstechnica.com/tech-policy/2013/02/before-facebook-there-was-surfbook-now-pay-up/>. Rembrandt recently sued Facebook for infringement, and in its complaint Rembrandt claimed that the Van Der Meer patent generally covers a “personal webpage diary,” which includes the ‘Like’ functionality “that allows an end user to ‘like’ or ‘share’ content.” See Complaint for Patent Infringement, Rembrandt Social Media, LP v. Facebook, Inc., No. 1:13CV00158 (Feb. 4, 2013), 11.

²¹⁴ *Litigation Management*, REMBRANDTIP, <http://www.rembrandtip.com/litigation-management.php> (last visited Apr. 27, 2015).

²¹⁵ U.S. Patent No. 6,415,316, *supra* note 213.

²¹⁶ U.S. Patent No. 6,289,362, *supra* note 213.

²¹⁷ Robbins, *supra* note 209, at 128.

²¹⁸ U.S. Patent No. 6,415,316, *supra* note 213. Similarly, with respect to the ‘362 patent, its claims generally cover a “system enabl[ing] a user to maintain a catalog of network objects of interest to the user.” U.S. Patent No. 6,289,362, *supra* note 213.

mobile device users, businesses, political candidates). While users could alternatively type and publish a post explicitly stating that they approve of whatever content is displayed to them, the two means of expression are not necessarily interchangeable. Thus, the Van der Meer patent likely fails the third prong, substantially burdening more speech than necessary.

On June 12, 2013, the District Court for the Eastern District of Virginia in *Rembrandt Social Media v. Facebook* granted Facebook's motion to dismiss Rembrandt's claims of willful infringement but declined to grant summary judgment in Facebook's favor given that Rembrandt adequately pled direct infringement of the '362 patent.²¹⁹ Thus, the Van der Meer patents are still alive and still have some force.

IV. COUNTERARGUMENTS

Opponents can make at least three general arguments to counter the applicability of First Amendment free speech analysis to the issuance of BMPs. First, opponents could argue that it is difficult to determine which inventions will serve the government's interest in promoting innovation *ex ante*.²²⁰ Second, they could argue that the USPTO already has mechanisms in place to determine patent eligibility and invalidation.²²¹ Finally, they could argue that the First Amendment "sets too high a threshold" for guiding courts, the USPTO, and practitioners in determining patent eligible subject matter.²²² These counterarguments are addressed in turn below.

A. Which Inventions Will Serve a Government Interest?

A crucial element of First Amendment free speech analysis is that the government's interest in imposing the restriction is substantial.²²³ A substantial government interest behind the grant of a patent is the "promotion of innovation."²²⁴ Critics, however, will argue that the USPTO and patent practitioners cannot know *ex ante* which BMPs will advance the promotion of innovation over the course of a patent term, and that such uncertainty would create additional, unnecessary burdens on both practitioners and the examining corps. Certainly, the USPTO and patent practitioners cannot know in advance whether or not a proposed business method will promote innovation if granted a patent. However, reviewing BMPs, either administratively at the USPTO or in courts during litigation, requires evaluation of the BMP's claims. Later

²¹⁹ *Rembrandt Social Media, LP v. Facebook, Inc.*, 950 F. Supp. 2d 876, 887 (E.D. Va. 2013).

²²⁰ Kauble, *supra* note 23, at 1170.

²²¹ *Id.*

²²² *Id.*

²²³ See *infra* Part IV.C.

²²⁴ U.S. CONST. art. 1, § 8, cl. 8. See also Kauble, *supra* note 23, at 1166–67.

applicants can rely on these evaluations of prior patents in assessing the innovative strength of their inventions.²²⁵

The USPTO can also decide whether a BMP promotes innovation through the patent's disclosure. For example, BMPs lacking source code often only list a series of steps such that the disclosure "fails to augment public knowledge" and thus fails to promote innovation.²²⁶ Still, patents promote innovation in a variety of ways other than through the disclosure of the technology contained in the patent.²²⁷ Because patents exist in balance with competition,²²⁸ they promote innovation by limiting misappropriation or "free-riding."²²⁹ When misappropriation concerns are high, it is likely that the invention is truly patent worthy.²³⁰ Often with overbroad BMPs, applicants file for patents covering automation of things already done in a nonautomated way, and for many of these BMPs the costs to produce automation are low. Where the costs of accomplishing automation or producing the technology are high, however, the need for patent protection increases because of the ease of copying in the digital domain.²³¹

B. Aren't There Already PTO Procedures in Place to Determine Validity?

Another counterargument provides that First Amendment free speech analysis is unnecessary because procedures at the USPTO currently exist to address issues of patentability.²³² These critics argue that the addition of another mechanism for finding patent invalidity injects uncertainty²³³ into a field that already has to grapple with review processes recently launched under the AIA, and that an additional layer of free speech analysis would overwhelm the USPTO and courts.²³⁴

²²⁵ See Kauble, *supra* note 23, at 1171.

²²⁶ FTC, PROPER BALANCE, *supra* note 23, ch. 3, at 1–2.

²²⁷ The disclosure requirement in the patent *quid pro quo*, as discussed in Part II, promotes innovation by enabling a person skilled in the art to learn from the invention... (so where the patent disclosure doesn't teach much, it doesn't really promote innovation...). See *supra* Part I.A; FTC, PROPER BALANCE, *supra* note 23, ch. 2, at 3–4.

²²⁸ See *supra* Part I.A. See also FTC, PROPER BALANCE, *supra* note 23, ch. 2, at 3–4.

²²⁹ FTC, PROPER BALANCE, *supra* note 23, ch. 2, at 6.

²³⁰ Limiting appropriation is particularly "important when R&D costs are 'high relative to the size of the potential market but imitation can be quick and easy, that is, with imitator R&D costs much lower than those incurred by the innovator.'" *Id.* at 4. Patents are especially required in such fields. However, this may be an inconclusive factor for business methods since advances in the digital domain are less costly and less concerned with free-riding than in the pharmaceutical industry, for example. See *id.*

²³¹ See *supra* Part III.D.

²³² See generally Matal, *supra* note 82.

²³³ Kauble, *supra* note 23, at 1171.

²³⁴ If expanding CBM review to all BMPs would overwhelm the USPTO, then arguably a new mechanism would also overwhelm the USPTO. See Ryan Davis, *Expanding Biz Method Review Could Swamp USPTO*, LAW360 (Oct. 31, 2013), <http://www.law360.com/articles/485134/expanding-biz-method-review-could-swamp-uspto> (arguing that expansion of the bill to make

This argument, however, fails because the presence of overbroad BMPs, which has boosted and sustained NPE activity, demonstrates that the procedures currently in place are insufficient.²³⁵

The FTC has noted that BMPs—only recently recognized by courts—exist in an industry characterized by cumulative or incremental innovation, low capital costs, rapid rates of technological change, and short product life cycles.²³⁶ Because of the nature of this industry, the USPTO often fails to examine relevant prior art.²³⁷ This industry arguably demands more rigorous procedures in assuring the validity of these patents since overbroad BMPs inhibit follow-on invention, increase barriers to entry, and discourage investment and innovation through uncertainty.²³⁸ Recent case law itself opens the possibility of applying First Amendment free speech analysis to determine the validity of overbroad BMPs where the Supreme Court expressly denounced patent eligibility for methods of organizing human activity.²³⁹

C. Does First Amendment Set Too High a Bar?

A third counterargument is that overlaying First Amendment free speech concerns onto patent matters imposes too high a bar for parties to satisfy, especially paired with the broadest reasonable interpretation standard, which is applied to claim construction during patent examination and administrative review.²⁴⁰ The broadest reasonable

eligible all BMPs is imprudent without “being sure [the USPTO] has the resources to handle the extra work”).

²³⁵ Kauble, *supra* note 23, at 1171 (considering gene patents, “[t]he argument that the USPTO and courts need no special mechanism for determining natural phenomena fails because the USPTO is currently not adequately categorizing patent applications”). *See also supra* Part II.

²³⁶ FTC, PROPER BALANCE, *supra* note 23, ch. 3, at 55.

²³⁷ *Id.* at 54. The FTC reports that the inability of examiners in the Business Methods art units to consider all the relevant prior art, which results in issuance of overbroad BMPs, is attributed to:

(1) the informal nature of software development, especially among the open source community; (2) the rapidly changing and complex nature of the software and Internet industries; (3) the absence of a legal requirement for patent applicants to disclose source code; (4) the use of trade secrecy for almost 20 years of commercial software development; and (5) the relatively recent recognition of the validity of business method patents by the courts.

Id.

²³⁸ *Id.* at 50.

²³⁹ *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347 (2014).

²⁴⁰ Kauble, *supra* note 23, at 1171. “The Patent and Trademark Office (“PTO”) determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (quoting *In re Am. Acad. Of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004)). Recently, in *In re Cuozzo Speed Technologies*, the Federal Circuit held that Congress intended the broadest reasonable interpretation standard for claim construction to apply to claims in *Inter Partes* Review proceedings and affirmed the invalidation of the claims at issue which were given their broadest reasonable interpretation and found obvious over the prior art. *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271 (Fed. Cir. 2015).

interpretation standard compels patent applicants to draft their claims and specifications with particularity in order to overcome rejection, and ensures that claims will not be interpreted more broadly than is justified by their disclosures.²⁴¹ Critics argue that requiring parties to draft disclosures having both the broadest reasonable interpretation standard and free speech standard in mind is too high a bar. This argument, however, fails because the government interest in promoting innovation is compelling, such that to overcome even strict scrutiny review, patentees need only satisfy the narrow tailoring prong (“in other words, that the means chosen do not ‘burden substantially more speech than is necessary to further the government’s legitimate interests’”).²⁴²

The narrow tailoring requirement, like the broadest reasonable interpretation standard, is a measure to implemented to serve the public interest, which becomes more urgent as the rate of technological development soars and technology becomes increasingly enmeshed in society.

CONCLUSION

Is Mr. Myhrvold right in saying that the term patent troll “has been used by people to mean someone they don’t like who owns patents”?²⁴³ His mission for Intellectual Ventures, to stand up for the intellectual property rights of inventors who lack the know-how and capital to enforce their patents and monetize their IP, is certainly noble. But for the troll patents that it has collected, society would celebrate Intellectual Ventures’ ingenuity in developing the secondary market for patents and its dedication to further a goal of the Constitution to promote innovation.

Advances in computer networks and the explosion of e-commerce and activity online demonstrate the growing importance of software and business methods today and has led to the recent judicial acceptance of business method patents. However, the relative newness of this class of patents combined with the cumulative growth of e-commerce and Internet technology has created an epidemic in the patent system where overbroad business method patents have come to read on everyday technology. Congressional measures have been designed to target the symptom, the so-called “patent troll,” but not the disease deriving from these overbroad patents. Judicial instruction has limited practitioners’

²⁴¹ *In re Cuozzo*, 778 F.3d at 1279.

²⁴² *Turner*, 512 U.S. at 662. The Supreme Court also spoke with regard to the government’s interest in patent grants for inventions that satisfy patentability requirements where “federal interest in disclosure is at its peak; these inventions, novel, useful and nonobvious, are ‘the things which are worth to the public the embarrassment of an exclusive patent.’” *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 1890 (1974) (citing *Graham v. John Deere Co.*, 383 U.S. 1 (1966)).

²⁴³ *When Patents Attack!*, *supra* note 1.

ability to cleverly draft overbroad claims, but has also failed to provide sufficient guidance to treat the confusion as to what is patent eligible.

Patents ordinarily have social costs, as they remove information from the public domain. Yet, depending on the breadth of their claims, business method patents carry even more social cost in their potential to limit expressive activities or those activities that facilitate expression. Alongside the patent laws, First Amendment guarantees freedom of expression. It follows that First Amendment can providing a limiting principle and go all the way in treating the disease, informing what the patentable boundaries are for not only gene sequencing technologies and business methods, but perhaps all overbroad patents.

*Stephanie A. Diehl**

* Senior Notes Editor, CARDOZO ARTS & ENT. L.J. Vol. 33, J.D., Benjamin N. Cardozo School of Law (2015); B.S., Computer Engineering, Case Western Reserve University (2011). Thank you to Elizabeth Weyl and the Vol. 32 and 33 *Cardozo Arts & Entertainment Law Journal* editors. Thank you Jeff Smith for your guidance in teaching me about business methods. To mom: thank you for being there always. © 2015 Stephanie A. Diehl.