

BACK AND FORTH: AN ANALYSIS OF THE BUSINESS METHOD EXCEPTION TO PATENTABILITY

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INTRODUCTION

The patentability of business methods has become a controversial subject in recent years as technological advancements force legal scholars and policymakers to reconsider long-standing doctrines. Historically, the U.S. Patent and Trademark Office (“USPTO”) only granted business method patents on rare occasions because they were deemed to be abstractions beyond the confines of patent law.¹ Complicating matters further, Congress has never explicitly clarified the definition of a “business method.”² This lack of guidance has left the courts struggling to formulate a test that determines whether or not business methods qualify as patentable subject matter.

Most legal scholars agree that business methods were first mentioned as non-patentable inventions in *Hotel Security Checking Co. v. Lorraine Co.* back in 1908.³ Today, entrepreneurs and software coders seeking legal protection face formidable hurdles consistent with the historical view that, because business methods are abstract ideas, it would be “contrary to the spirit of the patent law [. . .] to grant patents for [. . . these] analogous systems.”⁴ Many existing software patents covering business methods have even been

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¹ See *Bilski v. Kappos*, 561 U.S. 593, 626 (2010).

² See Elizabeth Bestoso, *Financial Business Method Patents: The Trend Toward Invalidity Under Section 101*, 89 TEMPLE L. REV. 369, 370 (2014).

³ See *Hotel Sec. Checking Co. v. Lorraine Co.*, 160 F. 467, 469 (2d Cir. 1908).

⁴ *Ex parte Abraham*, 1869 C.D. 59.

invalidated in recent years, pursuant to the Supreme Court's ruling in *Alice Corp. v. CLS Bank Int'l*.⁵ In that case, the court held that a patent for an electronic third-party escrow service—created to reduce the settlement risk associated with financial transactions—was ineligible for patent protection because the invention failed to meet the rigid two-part eligibility test laid out in *Mayo Collaborative Servs v. Prometheus Labs*.⁶ As a result of the *Alice Corp.* decision, courts have overturned patents at a high rate for innovative methods that are arguably worthy of protection, such as a system that allowed users to exchange loyalty rewards points between different vendors.⁷

However, for a brief window of time prior to *Alice Corp.*, this trend was reversed as a result of the Federal Circuit's 1998 ruling in *State Street v. Signature Financial*. After negotiations over a licensing agreement proved unsuccessful, State Street Bank brought an action against Signature Financial seeking a declaratory judgment that a patent was invalid on the grounds of unpatentable subject matter.⁸ The U.S. District Court of Massachusetts ruled in favor of State Street, and found that Signature's technical method for using software to conduct mutual fund accounting existed as an exception to the otherwise broad delineations of 35 U.S.C. § 101.⁹ Reversing the district court's summary judgment, the Federal Circuit attempted to clarify the confusion circling business methods and decisively “lay this ill-conceived exception to rest.”¹⁰ The Federal Circuit ruled that although a mathematical algorithm is an abstract idea, its application as a business method was patentable because it satisfied the useful-concrete-tangible test.¹¹ This contrasted with the *Mayo-Alice* test, which centered upon determining whether the subject matter in question was a “patent-ineligible concept”, and if so, whether its elements “transform[ed] that abstract idea into a patent-

⁵ Susan Decker, *When a Tech Patent Is Neither*, BLOOMBERG: BUSINESSWEEK (Aug. 17, 2016), <https://www.bloomberg.com/news/articles/2016-08-17/why-hundreds-of-software-patents-are-being-thrown-out> [<https://perma.cc/N56U-53XQ>].

⁶ *Alice Corp. v. CLS Bank Int'l*, 134 S.Ct. 2347, 2353 (2014).

⁷ *Loyalty Conversion Sys. Corp. v. Am. Airlines, Inc.*, 66 F. Supp. 3d 829, 835 (2014).

⁸ *State St. Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368, 1370 (1998).

⁹ *Id.* at 1376.

¹⁰ *Id.* at 1375.

¹¹ *Id.* at 1374.

eligible invention.”¹² Following *State Street*, applications for software patents increased from nearly 700 in 1996 to approximately 1,300 in 1998.¹³

This comment analyzes the Federal Circuit’s reversal and concludes that although the court was correct in holding Signature’s invention to be a patentable financial process and eradicating the business methods exception, the Federal Circuit unintentionally created an unnecessary test instead of relying on the text of the statute. By remanding, the court moved closer to striking the proper balance between protecting sophisticated inventions and preventing monopolies over ideas,¹⁴ but missed an opportunity to narrow the scope of the patentable subject matter.

TECHNOLOGICAL BACKGROUND

In 1993, Signature obtained U.S. Patent No. 5,193,056 for a data-processing system under the proprietary name Hub and Spokes.¹⁵ The system assisted mutual fund accounting and administration¹⁶ in relation to a new investment structure in which several individually managed funds, referred to as “spokes,” pool their assets together by contributing to one central vehicle with the same investment objective—the “hub.”¹⁷ Although all assets are commingled, the individual funds continue to levy their own fees and expenses.¹⁸ This arrangement provides the investors with many benefits, including achieving economies of scale and realizing the tax advantages of a partnership.¹⁹

The Hub and Spokes investment system used algorithms to track the financial information flowing from spokes and determine the true value of each fund.²⁰ It also allocated the appropriate amount of income, expenses,

¹² Alice Corp. v. CLS Bank Int’l, 134 S.Ct. 2347, 2358 (2014).

¹³ Julia Angwin, ‘Business-Method Patents’ Create Growing Controversy, WALL ST. J. (Oct. 3, 2000, 12:01 AM), <https://www.wsj.com/articles/SB97052967318492257> [<https://perma.cc/E5SN-NRGV>].

¹⁴ Bilski v. Kappos, 561 U.S. 593, 606 (2010).

¹⁵ State St. Bank & Trust Co. v. Signature Fin. Grp., 149 F.3d 1368, 1371 (1998).

¹⁶ *Id.*

¹⁷ *Hub and Spoke Structure*, INVESTOPEDIA, http://www.investopedia.com/terms/h/hub_and_spoke_structure.asp#ixzz4Xc6jYShL (last visited Jan 25, 2017) [<https://perma.cc/WGA5-N4EP>].

¹⁸ Kristin Davis, *Mutual Funds: Bring in the Clones*, 47 KIPLINGER’S PERS. FIN. MAGAZINE 14, 14-15 (1993).

¹⁹ *State St.*, 149 F.3d at 1370.

²⁰ *Id.*

gains and losses to each spoke on a daily basis, as required by the IRS.²¹ Because these calculations were complex and time-sensitive, performing them by hand was impractical, and a computer or similar device was required.²² Although Hub and Spokes fund structuring has been largely abandoned in favor of newer methods, this innovation coupled mathematical formulas with technical application in a manner that significantly shaped the investment management industry in the late 1990s.²³

LEGAL HISTORY

Signature's method for transforming "discrete dollar amounts [. . .] through a series of mathematical calculations into a final share price" was deemed patentable not based on the nature of the invention, but rather the output it produced. The *State Street* court relied on a previous case where it upheld a patent on a method for creating a waveform on the digital display system of an oscilloscope because it was "a specific machine [used] to produce a useful, concrete, and tangible result."²⁴ By adopting the language from *Allapat*, the court firmly established this useful-concrete-tangible test and held that even a result expressed in an abstract idea, such as numbers, could qualify a business method as patentable.²⁵

A TEXTUAL CRITIQUE OF THE NEW TEST

At its core, patent law exists to "promote the progress of science" by allowing individuals to secure certain rights over their inventions.²⁶ These rights are not unconstrained: in § 101, Congress limited the subject matter of patentable claims to inventions or discoveries related to "any new and useful process, machine, manufacture, or composition of matter."²⁷ Further, § 100(b) of the Act defines a process as an "art, or method" and includes a new use of any one of the statutorily provided categories for patentable subject matter.²⁸

²¹ U.S. Patent No. 5,193,056 (issued Mar. 9, 1993).

²² *State St.*, 149 F.3d at 1371.

²³ Douglas L. Price, *Assessing the Patentability of Financial Services and Products*, 3 J. HIGH TECH. L. 141 (2004).

²⁴ *In re Alapat*, 33 F.3d 1526, 1544 (1994).

²⁵ *State St.*, 149 F.3d at 1375.

²⁶ U.S. CONST. art. I, § 8, cl. 8.

²⁷ 35 U.S.C. § 101 (1994).

²⁸ 35 U.S.C. § 100(b) (1994).

Section 273 provides a defense specifically for business method patents, which suggests Congress intended at least some of these inventions to be covered, so long as they met the relevant statutory requirements.²⁹ Thus, the methods in *State Street* certainly constituted patentable subject matter under § 101, and were rightfully granted patents because they were also novel,³⁰ non-obvious,³¹ and contained a written description.³²

Although applying patentability questions to business procedures may appear straightforward, courts have struggled with interpreting this language in the context of intangible protocols that optimize corporate operations in the digital age. Although this area of the law has undergone significant revisions, beginning with *State Street*, the Court has consistently held that “laws of nature, natural phenomena, and abstract ideas” are categorically unpatentable.³³ Some scholars argue that the Act leaves open whether or not less traditional business methods, such as those outside of chemical processing and manufacturing, are included under § 101.³⁴ The useful-concrete-tangible test the court adopted to avoid this question fails to truly clarify this analysis.³⁵

Both business methods and technology advance rapidly and unpredictably.³⁶ As a result, society has witnessed significant shifts in technology over the past few years, and the law has struggled to keep pace with these advancements. The useful-concrete-tangible test from *State Street*

²⁹ See *Bilski v. Kappos*, 561 U.S. 593, 607 (2010).

³⁰ 35 U.S.C. § 102 (1994) (“A person shall be entitled to a patent unless – the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention...”).

³¹ 35 U.S.C § 103 (1994). (This statute sets forth that no patents may be granted if “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious...”).

³² 35 U.S.C § 112 (1994). (“The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms...”).

³³ *E.g.*, *Bilski*, 561 U.S. at 601; see also *Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

³⁴ Megan M. la Belle & Heidi M. Schooner, *Big Banks and Business Method Patents*, 16 U. PA. J. BUS. L. 431 (2014).

³⁵ *State St. Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368, 1373 (1998).

³⁶ Amy Harmon, *Recording Industry Goes After Students Over Music Sharing*, N.Y. TIMES April, 23, 2003, <http://www.nytimes.com/2003/04/23/us/recording-industry-goes-after-students-over-music-sharing.html> [<https://perma.cc/7AAP-WWZU>]. (“Napster became an overnight sensation in 1999” that completely altered the recording industry and revolutionized the business of music distribution.).

was eventually be replaced by the machine-or-transformation test in *Bilski*,³⁷ and more recently a focus on whether an abstract idea contains an “inventive concept” in *Alice Corp.*³⁸ But even these tests are difficult to apply given modern procedures for executing business tasks. For example, the test from *Bilski* created a supposed physicality requirement that excludes newer technologies relying on intangible ideas,³⁹ and the “inventive concept” described in *Alice* is difficult to distinguish from abstractions. Instead of creating a new test every time the Court backs itself into a corner, an emphasis should be placed on referring to the statute since it was drafted broadly for a purpose.

THE MISCONCEPTION OF THE BUSINESS METHOD EXCEPTION

After concluding that Signature’s patented process met the threshold of the mathematical algorithm exception via the useful-concrete-tangible test, the Federal Circuit scrutinized the financial accounting software in light of the business method exception.⁴⁰ It found that the lower court eliminated what had historically served as a bright-line rule to measuring patentable subject matter because it was, at best, created in dictum.⁴¹ In hindsight, overturning this rule which was thought to be long-settled proved to be more notable than the creation of the useful-concrete-tangible test and made *State Street* an infamous case in patent law.

As evidence that the business method exception was originally a misinterpretation, the court explained that the exemption had never been raised in court as a reason to disqualify an invention from patent protection.⁴² Rather, claims for business method patents are typically overturned for a more apparent reason associated with Title 35.⁴³ Even more telling is the fact that the case responsible for giving birth to the exception never even indirectly mentions the concept. A careful analysis of *Hotel Security Checking Co. v. Lorraine Co.* reveals no implication of a categorical exclusion for business methods. Instead, the modified process for capturing and relaying customer

³⁷ *Id.*

³⁸ *Alice Corp. v. CLS Bank Int’l*, 134 S.Ct. 2347, 2355 (2014).

³⁹ Sarah Beth Smith, *Ultramercial and Prometheus: How Transformation Analysis After Bilski Is Changing to Accommodate Modern Technologies*, 4 AM. U. INT. PROP. BR. 2 (2013).

⁴⁰ *State St.*, 149 F.3d at 1375.

⁴¹ Price, *supra* note 23, at 143.

⁴² *Id.*

⁴³ *Id.*

food orders in a manner that minimized fraud and speculation was ruled unpatentable because the nature of its invention would be obvious to anyone familiar with the food service industry. While it is true that the method described in the case is abstract and probably lacks the tangible results necessary to be a patentable business method, the Second Circuit based its ruling strictly on a failure to meet the standards for novelty and non-obvious subject matter respectively set forth in § 102 and § 103.

Most *State Street* critics accuse the court of exercising a level of judicial activism that ultimately thwarted innovation by allowing creators to monopolize abstract ideas and profit from them unfairly.⁴⁴ In reality, this judicially-created exception deeming business methods inherently unpatentable was a flaw reinforced over time. Eventually, the business method exemption became accepted as a “vague and amorphous” legal concept often overlooked by courts.⁴⁵ Under this logic, the Circuit Court’s decision to unambiguously eliminate the business method exemption was not a radical move against *stare decisis*, but a simple correction of the historical error. Indeed, the court resolved that “business methods have been, and should have been, subject to the same legal requirements for patentability as applied to any other process or method.”⁴⁶

CONCLUSION

Early courts that interpreted the *Hotel Security* ruling as a general exception were understandably trying to create a reliable short-cut for what is often a daunting analysis; however, the attempt backfired. In today’s environment, the line between abstract principles of nature and sophisticated business processes has blurred as technology continues to weave its way into traditional business tasks. For this reason, claims for business method patents must be examined on a case-by-case basis. *State Street* took a crucial step by highlighting the inadequacy of the business methods exclusion once and for all. Unfortunately, instead of narrowing the scope of patentable methods by reinforcing a reliance on statutory interpretation, the court created a new test that only yielded more confusion and opened the floodgates at the USPTO. This led courts to overcorrect the issue in more recent cases. In particular, *Alice Corp.* has moved us back to a world where business method patents are

⁴⁴ Angwin, *supra* note 13.

⁴⁵ Michael Risch, *America’s First Patents*, 64 FLA. L. REV. 1279 (2012).

⁴⁶ *State St. Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368, 1375 (1998).

relatively difficult to obtain. People will undoubtedly continue to invent, but this may be a disincentive that hampers commercial innovations requiring significant research and development investments to move society forward.⁴⁷ It is misguided to claim that technological development uniformly pushes in favor of broader patentability,⁴⁸ but the Supreme Court's reversion to tighter rules surrounding business methods will undoubtedly have a drastic effect on innovation as technological practices continue to evolve.

⁴⁷ Rajnish K. Rai & Srinath Jagannathan, *Do Business Method Patents Encourage Innovation?*, B.C. INTELL. PROP. & TECH. F., (2012), <http://bciprf.org/wp-content/uploads/2012/10/Business-Method-Patents-and-Innovation.pdf> [<https://perma.cc/RWW2-WSZD>].

⁴⁸ John F. Duffy, *Why Business Method Patents?*, 63 STAN. L. REV. 1247, 1285 (2011), <http://www.stanfordlawreview.org/wp-content/uploads/sites/3/2011/06/Duffy-63-Stan-L-Rev-1247.pdf> [<https://perma.cc/UM7S-DEX7>].