



WAKE FOREST
INTELLECTUAL PROPERTY
LAW JOURNAL

VOLUME 9

2008 – 2009

NUMBER 1

The Death of *State Street*?

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Abstract

Last year marked the tenth anniversary of the Court of Appeals for the Federal Circuit’s opinion in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, holding that mathematical algorithms are patentable under section 101 of the Patent Act as long as they have “practical utility,” and that there is no “business method exception,” inviting ongoing debate over the value, validity, and public benefit of pertinent patents.¹ This article takes a look at what has happened since the issuance of that opinion, both at the Supreme Court and Federal Circuit level, including the 2007 Federal Circuit decisions in *In re Comiskey* and in *In re Nuijten* and last year’s en banc review of *In re Bilski*, which put at least part of *State Street* to rest.

I. Introduction

About one decade ago, in 1998, the United States Court of Appeals for the Federal Circuit—a unified federal appellate court that was established to better facilitate the review of patent cases,² and which has been called “pro-patent”³—held in *State Street Bank &*

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¹ *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1375-76 (Fed. Cir. 1998).

² See Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25; see also S. REP. No. 97-275 (1981), as reprinted in 1982 U.S.C.C.A.N. (96 Stat.) 25.

³ See Hon. Richard Linn, *The Future Role of the United States Court of Appeals for the Federal Circuit Now That It Has Turned 21*, 53 AM. U. L. REV. 731, 733 (2004) (“[T]he Federal Circuit was soon perceived to be a pro-patent court.”) [hereinafter Linn, *The Future Role*]; see also Paul M. Baisier & David G. Epstein,

Trust Co. v. Signature Financial Group, Inc. that, in determining whether a patent claim's subject matter fits within section 101 of the Patent Act, the courts "should not focus on *which* of the four categories of subject matter [listed in section 101] a claim is directed to—process, machine, manufacture, or composition of matter—but rather on the essential characteristics of the subject matter, in particular, its practical utility."⁴ The court continued to call the "business method exception,"⁵ which was believed to be a judicially-created doctrine excluding business methods from patentability, "ill-conceived," and held that the question "[w]hether [patent] claims are directed to subject matter within § 101 should not turn on whether the claimed subject matter does 'business' instead of something else."⁶

Patent experts have interpreted the Federal Circuit's holding in *State Street* to mean that the question of whether an invention is patentable subject matter turns solely on the question of its practical utility, while the four categories of subject matter provided in section 101 were more or less exemplary.⁷ *State Street* and the concept of patenting business methods led to ongoing controversial public debate over the value, validity, and public benefit of the same,⁸ including debates over specific controversial patents such as the Amazon.com one-click buy patent.⁹

In 2006, the Supreme Court of the United States took on patent cases for the first time in twenty-five years and issued opinions limiting patent owner and applicant's rights by qualifying doctrines established by the Federal Circuit. In one case, *eBay Inc. v. MercExchange, L.L.C.*, the Supreme Court abolished the established

Resolving Still Unresolved Issues of Bankruptcy Law: A Fence or An Ambulance, 69 AM. BANKR. L.J. 525, 539 (1995) ("The Federal Circuit has been criticized as being notoriously pro-patent." (citing Eric Schmitt, *Judicial Shift in Patent Cases*, N.Y. TIMES, Jan. 21, 1986, at D2)) [hereinafter Baisier & Epstein, *Resolving Still Unresolved Issues*].

⁴ *State Street*, 149 F.3d at 1375.

⁵ *Id.*

⁶ *Id.* at 1377.

⁷ See, e.g., Steven Seidenberg, *Patent Pushback: The Federal Circuit Gets the Message, May Be Loosening Patent Protections*, A.B.A. J. Dec. 2007, at 14, 15.

⁸ See, e.g., Michael S. Guntersdorfer & David G. Kay, *Software Patents Pro And Con*, IEEE SOFTWARE MAG., July-Aug. 2002, at 8, 8-10, available at <http://doi.ieeecomputersociety.org/10.1109/MS.2002.10020> (responding to letters to the editor regarding previous publication: Michael S. Guntersdorfer & David G. Kay, *How Software Patents Can Support COTS Component Business*, IEEE SOFTWARE MAG., May-June 2002, at 78, available at <http://doi.ieeecomputersociety.org/10.1109/MS.2002.1003460>).

⁹ See, e.g., Stephen Dirksen et al., *Who's Afraid of Amazon.com v. Barnesandnoble.com?*, 2001 DUKE L. & TECH. REV. 0003, ¶¶ 5-6, <http://www.law.duke.edu/journals/dltr/articles/2001dltr0003.html>.

concept of so-called “automatic injunctions” in patent infringement cases holding that consideration of an entry of a permanent injunction in a patent case is subject to the same four-factor test applicable in non-patent cases and that it is not automatic even after infringement has been found.¹⁰ In another case, *KSR International Co. v. Teleflex*, the Court tackled the question of when a patent claim is obvious and, therefore, unpatentable under section 103, broadening the way prior art could be used to find the same and demoting a showing of a motivation to combine such prior art to merely one way of proving obviousness, instead of a requirement.¹¹ Finally, in *MedImmune, Inc. v. Genentech, Inc.*, the Supreme Court clarified that accused patent infringers, and even licensees, may seek declaratory judgments of invalidity and/or noninfringement even without threat of suit.¹²

This new trend of limiting patent rights by the Supreme Court then arrived at the Federal Circuit. Aside from following the Supreme Court’s decisions, which the Federal Circuit is bound to do, the Federal Circuit appears to go beyond these holdings and seems to reign in other broad holdings as well. It has specifically done so to its holding in *State Street*, which the Supreme Court has already criticized in non-binding concurrences and dissents.¹³ This article reviews the jurisprudence of the patentability of business and computational methods and computer programs before and after *State Street*, and provides what appears to be the current rule after the Federal Circuit’s most recent decision in *In re Bilski*.

II. The Rise of *State Street*

Section 101 of the Patent Act, encoded in Title 35 of the United States Code, defines which inventions are patentable: “any new and useful process, machine, [article of] manufacture, or composition of matter, or any new and useful improvement thereof.”¹⁴ In the early twentieth century, the United States Supreme Court clarified that “scientific truth, or the mathematical expression of it, is not patentable invention,”¹⁵ and neither are “phenomena of nature.”¹⁶

¹⁰ See *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391-92 (2006).

¹¹ *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 127 S. Ct. 1727, 1739-43 (2007).

¹² See *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, 127 S. Ct. 764, 770-77 (2007).

¹³ See *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 136 (2006) (mem.) (Breyer, J., dissenting). See, e.g., *eBay*, 547 U.S. at 397 (Kennedy, J., concurring).

¹⁴ 35 U.S.C. § 101 (2006).

¹⁵ *Mackay Radio & Tel. Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939).

¹⁶ *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948).

In 1972, the Supreme Court reiterated in *Gottschalk v. Benson* that mathematical formulae are not patentable.¹⁷ Accordingly, it rejected a software program that converted binary-coded decimal numbers into pure binary numbers as it “ha[d] no substantial practical application except in connection with a digital computer.”¹⁸ Six years later, the Court further rejected an application for a method that computed updated “alarm limits” based on temperature and other process factors during catalytic conversion in *Parker v. Flook*, even though “the claims cover a broad range of potential uses of the method,” including “in the petrochemical and oil-refining industries.”¹⁹ Indeed, claim one of the application asserted “[a] method for updating the value of at least one alarm limit on at least one process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons”²⁰

The Court explained its decision as follows:

A competent draftsman could attach some form of post-solution activity to almost any mathematical formula; the Pythagorean theorem would not have been patentable, or partially patentable, because a patent application contained a final step indicating that the formula, when solved, could be usefully applied to existing surveying techniques. The concept of patentable subject matter under § 101 is not ‘like a nose of wax which may be turned and twisted in any direction’²¹

The Court added, “[t]he rule that the discovery of a law of nature cannot be patented rests, not on the notion that natural phenomena are not processes, but rather on the more fundamental understanding that they are not the kind of ‘discoveries’ that the statute was enacted to protect.”²² With regard to its prior holding in *Benson*, the *Flook* Court noted:

It should be noted that in *Benson* there was a specific end use contemplated for the algorithm— utilization of the

¹⁷ *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972).

¹⁸ *Id.* at 71.

¹⁹ *Parker v. Flook*, 437 U.S. 584, 586 (1978).

²⁰ *Id.* at 596-97.

²¹ *Id.* at 590 (quoting *White v. Dunbar*, 119 U.S. 47, 51 (1886)).

²² *Flook*, 437 U.S. at 593.

algorithm in computer programming. . .
. . . Of course, as the Court pointed out,
the formula had no other practical
application; but it is not entirely clear
why a process claim is any more or less
patentable because the specific end use
contemplated is the only one for which
the algorithm has any practical
application.²³

In 1981, the Supreme Court engaged in a seeming U-turn, when it decided in *Diamond v. Diehr* that an invention could not be denied a patent solely because it contained a computer program.²⁴ Diehr had filed a patent application for a process for molding (“curing”) synthetic rubber.²⁵ The curing process depended on multiple factors such as rubber size, thickness, cure time and pressure, and the temperature inside the mold.²⁶ Diehr used a computer program that continuously measured the temperature on the inside of the mold and controlled the press accordingly.²⁷ The preamble to claim one read: “A method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer, comprising:”²⁸

Hence, the invention in both *Flook* and *Diehr* used computer programs to regulate processes by continuously measuring variables such as temperature. The Court explained the distinction:

Parker v. Flook, supra, presented a similar situation. The claims were drawn to a method for computing an “alarm limit.” An “alarm limit” is simply a number and the Court concluded that the application sought to protect a formula for computing this number. Using this formula, the updated alarm limit could be calculated if several other variables were known. The application, however, did not purport to explain how these other variables were to be determined, nor did it purport “to

²³ *Id.* at 590 n.11 (citation omitted).

²⁴ *Diamond v. Diehr*, 450 U.S. 175, 187 (1981).

²⁵ *Id.* at 177.

²⁶ *Id.*

²⁷ *Id.* at 178-79.

²⁸ *Id.* at 181 n.5.

contain any disclosure relating to the chemical processes at work, the monitoring of process variables, or the means of setting off an alarm or adjusting an alarm system. All that it provides is a formula for computing an updated alarm limit.” In contrast, the respondents here [i.e., Diehr et al.] do not seek to patent a mathematical formula. Instead, they seek patent protection for a process of curing synthetic rubber. Their process admittedly employs a well-known mathematical equation, but they do not seek to pre-empt the use of that equation. Rather, they seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process.²⁹

Hence, the key distinction was that *Diehr* only sought protection for use of a well-known equation within his specific, patentable invention, while the application in *Flook* contained no patentable invention “once th[e] algorithm [wa]s assumed to be within the prior art.”³⁰ In other words, the invention in *Diehr* was not the known formula itself, but it merely used the formula as part of a system that, overall, was inventive.³¹ The claimed invention in *Flook* was instead limited to computing the alarm limit only—which was not inventive by itself—and it “did not ‘explain how to select the approximate margin of safety, the weighing factor, or any of the other variables.’”³² Yet, some patent law scholars considered *Diehr* a “turning point.”³³ Combined with the establishment of the allegedly pro-patent Court of Appeals for the Federal Circuit,³⁴ and the

²⁹ *Id.* at 186-87 (quoting *Parker v. Flook*, 437 U.S. 584, 586 (1978) (footnote omitted)).

³⁰ *Flook*, 437 U.S. at 594.

³¹ *See Diehr*, 450 U.S. at 187.

³² *Id.* at 187 n.10 (quoting *Flook*, 437 U.S. at 586).

³³ *See, e.g., R. O. Nimtz, Diamond v. Diehr: A Turning Point*, 8 RUTGERS COMPUTER & TECH. L.J. 267, 270 (1981).

³⁴ *See* Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25; *see also* S. REP. No. 97-275 (1981), *reprinted in* 1982 U.S.C.C.A.N. (96 Stat.) 25.; Linn, *The Future Role*, *supra* note 3, at 733 (“[T]he Federal Circuit was soon perceived to be a pro-patent court.”). *See also* Baisier & Epstein, *Resolving Still Unresolved Issues*, *supra* note 3, at 539 (“The Federal Circuit has been criticized as

continued rise of computer technology in the 1980s and 90s—accompanied by a rise of computer-related patent applications³⁵—the Patent Office developed guidelines for computer-related inventions and began issuing patents that were explicitly software-related.³⁶

In 1998, the Federal Circuit effected the high watermark of software patentability. Until then, two exceptions to patentability had been recognized in the legal community: the mathematical algorithm exception (applying the so-called *Freeman-Walter-Abele* test to determine whether an algorithm was unpatentable because it only represented an abstract idea)³⁷ and, arguably, the business method exception.³⁸

In *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, the Federal Circuit found that the mathematical algorithm test was misleading³⁹ and that the business method exception had never existed as such (rather, that prior business method inventions had always been denied on other grounds).⁴⁰ The court held that instead of focusing on which one of the four listed categories the subject matter of an invention fits into, it is the practical utility requirement of section 101 of the Patent Act that is essential, namely whether a “useful, concrete and tangible result” is produced, which should be tested together with the requirements of novelty (section 102) and non-obviousness (section 103).⁴¹

being notoriously pro-patent.” (citing Eric Schmitt, *Judicial Shift in Patent Cases*, N.Y. TIMES, Jan. 21, 1986, at D2)).

³⁵ See, e.g., Jennifer Sullivan, *Net Overloads US Patent Agency*, WIRED.COM, May 4, 1999, <http://www.wired.com/print/politics/law/news/1999/05/19473> (“[Patent commissioner Todd] Dickinson says the number of computer-related patent applications has skyrocketed 250 percent during the Clinton administration.”).

³⁶ See UNITED STATES PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 2110 (4th ed. 1979, rev. 1981); see also United States Patent and Trademark Office, Examination Guidelines for Computer-Related Inventions, 61 Fed. Reg. 7478 (Feb. 28, 1996).

³⁷ See *In re Pardo*, 684 F.2d 912, 915 (C.C.P.A. 1982); see also *In re Freeman*, 573 F.2d 1237, 1246 (C.C.P.A. 1978); *In re Walter*, 618 F.2d 758, 767 (C.C.P.A. 1980); *In re Abele*, 684 F.2d 902, 907 (C.C.P.A. 1982).

³⁸ While it had made its way into legal treatises, the business method exception was never explicitly upheld. See 1-1 DONALD S. CHISUM, CHISUM ON PATENTS § 1.03[5] (2000) (discussing the rise and fall of the business method exception or exclusion). See also *In re Howard*, 394 F.2d 869, 870-72 (C.C.P.A. 1968) (mentioning the alleged business method exception but stopping short of deciding whether business methods are inherently unpatentable as suggested by concurring Judge Kirkpatrick).

³⁹ *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998) (quoting *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994)).

⁴⁰ *Id.* at 1375.

⁴¹ *Id.* at 1374-75 (quoting *Alappat*, 33 F.3d at 1544).

In *AT&T Corp. v. Excel Communications, Inc.*, the Federal Circuit affirmed its holding in *State Street*, expressing that the *State Street* opinion was “gui[ded]” by the Supreme Court’s decision in *Diehr*,⁴² and reiterating that ““after *Diehr* and *Chakrabarty*, the *Freeman-Walter-Abele* test has little, if any, applicability to determining the presence of statutory subject matter.”⁴³ However, the breadth of the *State Street* holding was arguably ignored subsequently in a less noticed decision by the Federal Circuit in *WMS Gaming Inc. v. International Game Technology*, where the court appears to rely solely on the previous rule expressed in *In re Alappat*.⁴⁴ In *Alappat*, the court had held that algorithms are patentable because they limit a general purpose computer to a specific purpose performing functions pursuant to the software, whereby creating a “special purpose machine.”⁴⁵ With regard to *State Street*, the *WMS Gaming* opinion only notes that the court in *State Street* agreed with the rule set out in *Alappat*, but the opinion does not mention *State Street*’s more sweeping statement that whether an invention constitutes a process, machine, manufacture or composition—the categories recited in section 101—is immaterial, as long as it has practical utility and also satisfies “the other ‘conditions and requirements’ of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice.”⁴⁶ If it is indeed only the utility which matters, and not whether an invention is a machine or not, focusing the analysis on whether an invention is a “special purpose machine” seems off mark.⁴⁷

However, overall, it appears that the spirit of the time was that “anything under the sun that is made by man” is patentable,⁴⁸ and it

⁴² *AT&T Corp. v. Excel Cmmc’ns, Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1999).

⁴³ *Id.* at 1359 (quoting *State Street*, 149 F.3d at 1374). The Supreme Court’s holding in *Diamond v. Chakrabarty* regarded the patenting of laboratory-created micro-organisms, not software, but it is relevant as to the patentability of “products of nature.” See *Diamond v. Chakrabarty*, 447 U.S. 303, 309-11 (1980).

⁴⁴ *WMS Gaming Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1348-49 (Fed. Cir. 1999).

⁴⁵ *Id.* at 1348-49 (quoting *Alappat*, 33 F.3d at 1545).

⁴⁶ Compare *WMS Gaming*, 184 F.3d at 1349 n.4 with *State Street*, 149 F.3d at 1375.

⁴⁷ See generally *State Street*, 149 F.3d 1375.

⁴⁸ See, e.g., *Chakrabarty*, 447 U.S. at 309 (quoting S. REP. NO. 82-1979, at 5 (1952); H.R. REP. NO. 82-1923, at 6 (1952)). See also *Diamond v. Diehr*, 450 U.S. 175, 182 (1981) (quoting S. REP. NO. 82-1979, at 5 (1952); H.R. REP. NO. 82-1923, at 6 (1952)); *Hughes Aircraft Co. v. United States*, 148 F.3d 1384, 1385 (Fed. Cir. 1998) (Clevenger, J., dissenting) (referring to *State Street* when noting that “this court has recently held, virtually anything is patentable”); Michael Guntersdorfer, *Software Patent Law: United States And Europe Compared*, 2003 DUKE L. & TECH. REV. 0006, ¶ 34, <http://www.law.duke.edu/journals/dltr/articles/2003dltr0006.html>.

took a newly discovered interest in patent law by the Supreme Court to reign in the breadth of patentability.

III. The Supreme Court's Born-Again Interest in Patent Law

For quite some time, it appeared that the Supreme Court might have been waiting for the Congressional action it had repeatedly requested with regard to patentability of new technology, such as computer programs.⁴⁹ In *Gottschalk v. Benson*, the Court had stated:

If these programs are to be patentable, considerable problems are raised which only committees of Congress can manage, for broad powers of investigation are needed, including hearings which canvass the wide variety of views which those operating in this field entertain. The technological problems tendered in the many briefs before us indicate to us that considered action by the Congress is needed.⁵⁰

Indeed, after *Diamond v. Diehr*, the Supreme Court took a hiatus of a quarter of a century before it considered a patent case again in *eBay Inc. v. MercExchange, L.L.C.*⁵¹

In, *eBay* the issue was the standard for when to enter an injunction against a defendant who has been found a patent infringer.⁵² Before *eBay*, the ““general rule [applied by the Federal Circuit was] that courts will issue permanent injunctions against patent infringement absent exceptional circumstances.””⁵³ This was sometimes referred to as an “automatic” injunction.⁵⁴

However, the Supreme Court expressly overruled this practice and returned to the “well established principles of equity [that] a

⁴⁹ See *Gottschalk v. Benson*, 409 U.S. 63, 73 (1972) (stating that “action by Congress is needed”); *Parker v. Flook*, 437 U.S. 584, 596 (1978) (stating that “a clear signal from Congress” was required (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 531 (1972))).

⁵⁰ *Benson*, 409 U.S. at 73 (footnotes omitted).

⁵¹ *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

⁵² See *id.* at 390-91.

⁵³ *Id.* at 391 (quoting *eBay, Inc. v. MercExchange, L.L.C.*, 401 F.3d 1323, 1339 (Fed. Cir. 2005)).

⁵⁴ See, e.g., D. Crouch, *eBay v. MercExchange: Automatic Injunction in Patent Cases*, PATENTLYO, Sept. 27, 2005, http://patentlaw.typepad.com/patent/2005/09/eBay_v_mercexch.html.

plaintiff seeking a permanent injunction must satisfy a four-factor test,” whether the case involves patent infringement or not, namely:

- (1) that [the plaintiff] has suffered irreparable injury;
- (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury;
- (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and
- (4) that the public interest would not be disserved by a permanent injunction.⁵⁵

Technically, *eBay* only regarded permanent injunctions.⁵⁶ Preliminary injunctions are not discussed in the opinion.⁵⁷ Indeed, when considering preliminary injunctions, the test applied is slightly different to account for the different state of the proceeding: “the moving party may be entitled to a preliminary injunction if it establishes [the following] four factors: ‘(1) a reasonable likelihood of success on the merits, (2) irreparable harm if an injunction is not granted, (3) balance of hardships . . . ; and (4) . . . the public interest.’”⁵⁸

However, it has been held that “[t]he standard for a permanent injunction is essentially the same as for a preliminary injunction,” and that the new *eBay* rule applies to both standards.⁵⁹ Accordingly, district courts have relied on *eBay* when considering preliminary injunctions as well.⁶⁰ Indeed, in a recent opinion, the Federal Circuit scrutinized and affirmed a district court’s decision to enter a preliminary injunction, citing to *eBay* when it prefaced its discussion that “[i]n patent cases, traditional rules of equity apply to requests for injunctive relief.”⁶¹

⁵⁵ *eBay*, 547 U.S. at 391.

⁵⁶ *See id.* at 390.

⁵⁷ *See id.*, *passim*.

⁵⁸ *See, e.g.*, *Sanofi-Syntheolabo v. Apotex, Inc.*, 470 F.3d 1368, 1374 (Fed. Cir. 2006) (quoting *Amazon.com v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1350 (Fed. Cir. 2001)).

⁵⁹ *Carico Invs., Inc. v. Texas Alcoholic Beverage Comm’n*, 439 F. Supp. 2d 733, 750 (S.D. Tex. 2006); *see also Rx.com v. Hruska*, No. H-05-4148, 2006 WL 2583434, at *8 (S.D. Tex. Sept. 7, 2006).

⁶⁰ *See, e.g.*, *Seitz v. Envirotech Sys. Worldwide Inc.*, No. H-02-4782, 2007 WL 1795683, at *2 (S.D. Tex. June 19, 2007) (mem.).

⁶¹ *Canon Inc. v. GCC Int’l Ltd.*, No. 2006-1615, 2008 WL 213883, at *2 (Fed. Cir. Jan. 25, 2008) (citing *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006)).

A little less than one year after *eBay*, the Supreme Court also decided *KSR International Co. v. Teleflex*.⁶² In *KSR*, the Court overruled another Federal Circuit test, called the “teaching, suggestion, or motivation,” or TSM, test, which it rejected as too “rigid.”⁶³ Under this test, “a patent claim [was] only proved obvious if ‘some motivation or suggestion to combine the prior art teachings’ [could] be found in the prior art, the nature of the problem, or the knowledge of a person having ordinary skill in the art.”⁶⁴

Relying on its own precedent, the Supreme Court held that despite a “need for ‘uniformity and definiteness,’”⁶⁵ the question of obviousness is “a broad inquiry . . . invit[ing] courts, where appropriate, to look at any secondary considerations”⁶⁶ Accordingly, the Court found the Federal Circuit’s TSM test “inconsistent” with Supreme Court precedent.⁶⁷

One such previous case the Court relied on was *Sakraida v. AG Pro, Inc.*, which had held that “when a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.”⁶⁸ Such “predictable variation[s],” whose patentability may be barred by 35 U.S.C. § 103, include ones drawn from elements found in “the same field *or a different one*.”⁶⁹ In other words, “familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.”⁷⁰ After all, “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.”⁷¹

The Court conceded that “[t]o facilitate review,” a court’s obviousness “analysis should be made explicit.”⁷² However, all that is required is that “there must be some articulated reasoning with some

⁶² *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 127 S. Ct. 1727, 1739-43 (2007).

⁶³ *Id.* at 1734, 1739-41.

⁶⁴ *Id.* at 1734 (quoting *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1323-24 (Fed. Cir. 1999)); *cf.* 35 U.S.C. § 103(a) (2006) (“A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter . . . would have been obvious . . . to a person having ordinary skill in the art . . .”).

⁶⁵ *KSR*, 127 S. Ct. at 1739 (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 18 (1966)).

⁶⁶ *Id.* (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)).

⁶⁷ *Id.*

⁶⁸ *Id.* at 1740 (quoting *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976)).

⁶⁹ *Id.* at 1739 (emphasis added).

⁷⁰ *Id.* at 1742.

⁷¹ *Id.*

⁷² *Id.* at 1741.

rational underpinning to support the legal conclusion of obviousness.”⁷³ “[T]he analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim”⁷⁴

In dismissing the TSM test, the Supreme Court recognized that “[h]elpful insights . . . need not become rigid and mandatory formulas.”⁷⁵ Finding that “[i]n many fields it may be that there is little discussion of obvious techniques or combinations,” the Court held that “obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.”⁷⁶ Contrary to the United States Court of Appeals for the Federal Circuit’s view that “[o]bvious to try’ has long been held not to constitute obviousness,”⁷⁷ the Supreme Court held that “the fact that a combination was obvious to try *might* show that it was obvious under § 103.”⁷⁸ Therefore, “any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.”⁷⁹

The Supreme Court also weakened patentees when it declared in early 2007 that licensees may sue their licensors in declaratory judgment actions, seeking a finding of invalidity or noninfringement.⁸⁰ Before this decision, a common perception had been that a party could not ask for such judicial declaration “unless the patentee threatened the alleged infringer with an infringement claim.”⁸¹ The problem for licensees was that “so long as [they] continue[d] to pay royalties, there [was] only an academic, not a real controversy, between the parties.”⁸² However, the Supreme Court held in *MedImmune, Inc. v. Genentech, Inc.* that the case or controversy requirement of Article III is satisfied where a licensee is essentially paying royalties “under protest,” while believing that the patent at issue is really invalid or not infringed.⁸³ The licensee is not required to first breach the license agreement to

⁷³ *Id.* (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Teleflex, Inc. v. KSR Int’l Co.*, 119 Fed. Appx. 282, 289 (Fed. Cir. 2005) (quoting *In re Deuel*, 51 F.3d 1552, 1559 (Fed. Cir. 1995)), *rev’d* 127 S. Ct. 1727 (2007).

⁷⁸ *KSR*, 127 S. Ct. at 1742 (emphasis added).

⁷⁹ *Id.*

⁸⁰ *See MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, 127 S. Ct. 764, 770-77 (2007).

⁸¹ *See* Eliot G. Disner, *Putting Some Common Sense Back into Patent Enforcement*, LOS ANGELES LAW., Dec. 2007, at 44, 44.

⁸² *MedImmune*, 127 S. Ct. at 773 (quoting *Altwater v. Freeman*, 319 U.S. 359, 364 (1943)).

⁸³ *See id.* (quoting *Altwater*, 319 U.S. at 365).

create an actual infringement controversy, thereby “risk[ing] treble damages and the loss of [most] of its business.”⁸⁴

The Court almost took another patent case in 2006, entitled *Laboratory Corp. of America Holdings v. Metabolite Laboratories, Inc.*, but then dismissed the writ of certiorari as having been improvidently granted.⁸⁵ However, the dissenting opinion by Justice Breyer, joined by Justices Stevens and Souter, could be understood as a harbinger of what was ahead.⁸⁶ Noting that “too much patent protection can impede rather than ‘promote the Progress of Science and useful Arts,’”⁸⁷ Justice Breyer took a direct stab at *State Street*: “That case does say that a process is patentable if it produces a ‘useful, concrete and tangible result.’ But this Court has never made such a statement and, if taken literally, the statement would cover instances where this Court has held the contrary.”⁸⁸

In sum, it appears that the Supreme Court decided that it was time to reign in the Federal Circuit on patent-favorability and substitute its own somewhat mechanical rules by underlying more general principles, thereby requiring greater consideration and balancing of case-specific factors and arguably reducing the predictability of a specific case’s outcome. It is up for discussion whether the Supreme Court’s recent opinions were influenced by the rising unpopularity of “patent trolls”—a derogative term coined in 2001 by Intel Corp.’s assistant general counsel Peter Detkin to describe TechSearch L.L.C., the plaintiff in a patent suit filed against Intel.⁸⁹ Consistent with Detkin’s use of the term in reference to TechSearch, “patent trolling” has been invoked often by others who disagree with the business models of entities such as Acacia Research Corporation, NTP, Inc., Rambus, Inc., Ronald A. Katz Technology Licensing, L.P., the plaintiff MercExchange, L.L.C. in the *eBay* case, and others—entities that engage in the business of securing or acquiring patents for the purpose of licensing the patented technology to other businesses (and suing those who use the technology but decline to acquire the licenses), while producing or offering few or no products themselves.⁹⁰ However, in *eBay*, concurring Justice

⁸⁴ *Id.* at 775.

⁸⁵ See *Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 548 U.S. 124, 124 (2006).

⁸⁶ *Id.* at 125-39 (Breyer, J., dissenting).

⁸⁷ *Id.* at 126-27 (emphasis omitted) (quoting U.S. Const. art. I, § 8, cl. 8).

⁸⁸ *Id.* at 136 (citation omitted).

⁸⁹ See, e.g., Lisa Lerer, *Meet the Original Patent Troll*, IP LAW & BUSINESS, July 20, 2006, <http://www.law.com/jsp/article.jsp?id=1153299926232>.

⁹⁰ See, e.g., Christopher A. Harkins, *Fending Off Paper Patents And Patent Trolls: A Novel “Cold Fusion” Defense Because Changing Times Demand It*, 17 ALB. L.J. SCI. & TECH. 407, 466-67 (2007).

Kennedy—joined by Justices Stevens, Souter and Breyer—addressed this industry specifically, and also took another stab at business method patents:

In cases now arising[,] trial courts should bear in mind that in many instances the nature of the patent being enforced and the economic function of the patent holder present considerations quite unlike earlier cases. An industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees. For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest. In addition[,] injunctive relief may have different consequences for the burgeoning number of patents over business methods, which were not of much economic and legal significance in earlier times. The potential vagueness and suspect validity of some of these patents may affect the calculus under the four-factor test.⁹¹

IV. A Back-Paddling Federal Circuit

The Federal Circuit is, of course, bound by the new Supreme Court precedent. For example, it has rigorously enforced the *eBay*

⁹¹ *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 396-97 (2006) (Kennedy, J., concurring) (citations omitted).

holding, even overturning erroneous district court decisions on an “abuse of discretion” standard.⁹² Indeed, it enforced *MedImmune* just as strictly: for example, recognizing that “[t]he Supreme Court’s opinion in *MedImmune* represents a rejection of our reasonable apprehension of suit test,” the court vacated a district court’s dismissal of a declaratory judgment action against a patent owner which was based on this former Federal Circuit test in *SanDisk Corp. v. STMicroelectronics, Inc.*⁹³ However, while commenting in the previously quoted concurrence and dissent in *eBay* and *Metabolite*, respectively, the Supreme Court has yet to issue a binding opinion rejecting *State Street*. And indeed, the Court may never will, as the Federal Circuit has arguably started to paddle back already all by itself.

In *In re Comiskey*, the Federal Circuit considered a patent application for a method for mandatory arbitration, a method it characterized “may be viewed as falling within the general category of ‘business method’ patents.”⁹⁴ The written description described “an automated system” implementing this method using a “computer on a network,” and some of the application’s claims were geared toward such system, but some others claimed the pure method without requiring “use of a mechanical device such as a computer.”⁹⁵

While technically affirming the holding in *State Street* that there is no general business method exception, the court also cautioned that *State Street* does not stand for the “patentability of business methods generally” either, but that “business methods ‘are subject to the same legal requirements for patentability as applied to any other process or method.’”⁹⁶ The court further cautioned that while “Congress intended statutory subject matter to include anything under the sun made by man,” “that this statement does ‘not . . . suggest that

⁹² See *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1379-80 (Fed. Cir. 2008) (holding that “whether an injunction is warranted in a patent case is to be determined, as in other cases, according to the well established four part test” and that the district court abused its discretion when it entered a permanent injunction, because the plaintiff would not be irreparably harmed by the defendant’s future sales as it was awarded royalties that included an “upfront entry fee,” and the irreparably harm factor “greatly outweigh[ed] the other *eBay* factors in this case” (citing *eBay*, 547 U.S. at 391)). See also *Amado v. Microsoft Corp.*, 517 F.3d 1353, 1359 (Fed. Cir. 2008) (affirming the district court’s dissolution of a permanent injunction in light of the *eBay* decision based on a finding of absence of irreparable harm and disservice to the public interest).

⁹³ 480 F.3d 1372, 1380, 1383 (Fed. Cir. 2007).

⁹⁴ *In re Comiskey*, 499 F.3d 1365, 1368-70, 1373-74 (Fed. Cir. 2007).

⁹⁵ *Id.* at 1368-70.

⁹⁶ *Id.* at 1374 (quoting *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1371, 1375, 1377 (Fed. Cir. 1998)).

§ 101 has no limits or that it embraces every discovery.”⁹⁷ So far, the holding includes no big surprises, but then the court continues:

“[T]he question is whether the method described and claimed is a ‘process’ within the meaning of the Patent Act.”

....

[T]he Supreme Court has held that a claim reciting an algorithm or abstract idea can state statutory subject matter only if, as employed in the process, it is embodied in, operates on, transforms, or otherwise involves another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter. . . . “[T]he Supreme Court has recognized only two instances in which such a method may qualify as a section 101 process: when the process ‘either [1] was tied to a particular apparatus or [2] operated to change materials to a ‘different state or thing.’”

....

[A] claim that involves both a mental process and one of the other categories of statutory subject matter (i.e., a machine, manufacture, or composition) may be patentable under § 101.

....

However, mental processes--or processes of human thinking--standing alone are not patentable even if they have practical application.⁹⁸

A requirement that a claim that involves a mental process must also involve one of the other categories of statutory subject matter expressly listed in section 101, namely a machine, manufacture or composition,⁹⁹ appears in stark contrast to the Federal Circuit’s previous holding in *State Street* that “[t]he question of whether a claim encompasses statutory subject matter should *not* focus on *which* of the

⁹⁷ *Id.* at 1375 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).

⁹⁸ *Id.* at 1375-77 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972); quoting *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); citing *Benson*, 409 U.S. at 67; *Diamond v. Diehr*, 450 U.S. 175, 182 n.7, 184 (1981) (citations omitted)).

⁹⁹ *See Comiskey*, 499 F.3d at 1377 (citing *Diehr*, 450 U.S. at 184).

four categories of subject matter a claim is directed to,” “but rather on the essential characteristics of the subject matter, in particular, its practical utility.”¹⁰⁰ Instead, *Comiskey* appears to reinvolve focus on these distinct categories when considering patentability under section 101.¹⁰¹

Based on this analysis, the court concluded that the pure method claims at issue did not fall within section 101, and remanded the case with regard to the other claims for determination “whether the addition of general purpose computers or modern communication devices to *Comiskey*’s otherwise unpatentable mental process would have been non-obvious to a person of ordinary skill in the art,” hinting at unpatentability of those remaining claims under section 103.¹⁰² Some commentators have interpreted this holding to “add[] another proviso,” namely, “[t]o be considered patentable subject matter, the inventor’s process must either be implemented by a specific type of machine or change materials to a different state.”¹⁰³

In *In re Nuijten*, a patent appeal case decided by the Federal Circuit on the same day as *Comiskey*, the court went straight to the *State Street* controversy to resolve the apparent conflict described above.¹⁰⁴ The claims at issue in *Nuijten* involved electrical or electromagnetic signals, described via process of encoding the same.¹⁰⁵ The court held that a transitory signal did not fit any of the four categories of patentable subject matter of section 101 and was, therefore, unpatentable.¹⁰⁶ The court clarified the apparent discrepancy with *State Street* as follows:

Before embarking on an analysis considering each of the four categories, we must address a prior statement of this court which *Nuijten* argues forecloses such an analysis. In *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1375 (Fed. Cir. 1998), we noted that “[t]he question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to—process, machine,

¹⁰⁰ *State Street*, 149 F.3d at 1375 (emphasis added; footnote omitted).

¹⁰¹ See *Comiskey*, 499 F.3d at 1375-77.

¹⁰² *Id.* at 1380-81.

¹⁰³ See Seidenberg, *supra* note 7, at 15.

¹⁰⁴ *In re Nuijten*, 500 F.3d 1346, 1353-54 (Fed. Cir. 2007).

¹⁰⁵ See *id.* at 1351.

¹⁰⁶ *Id.* at 1353-57.

manufacture, or composition of matter—but rather on the essential characteristics of the subject matter, in particular, its practical utility.” However, we do not consider this statement as a holding that the four statutory categories are rendered irrelevant, non-limiting, or subsumed into an overarching question about patentable utility. . . . In telling courts where they “should not focus” their analysis, *State Street* was advising not to be concerned about debates over “*which* of the four categories,” *id.* (emphasis added), subject matter falls into—that is, not to be overly concerned with pigeonholing subject matter once the court assures itself that *some* category has been satisfied. If, for instance, a court determines that a claim encompasses either a process or machine but is unsure which category is appropriate, it need not resolve the ambiguity. The claim must be within at least one category, so the court can proceed to other aspects of the § 101 analysis.¹⁰⁷

In other words, it is not the practical utility alone that section 101 requires—as many patent experts had understood *State Street* to hold¹⁰⁸—but an invention still has to fit into *at least* one of the four listed categories, even if it does not fit into a single one.¹⁰⁹

For those who wonder why the product-by-process¹¹⁰ signal claim at issue in *Nuijten* did not qualify as a manufacture, it should come as a consolation that the Federal Circuit was not unanimous on this issue either: Judge Gajarsa, writing for the two-judge majority of

¹⁰⁷ *Id.* at 1353-54 (footnote omitted).

¹⁰⁸ See Seidenberg, *supra* note 7, at 15.

¹⁰⁹ *Nuijten*, 500 F.3d at 1354.

¹¹⁰ Product-by-process claims allege a product, “which . . . is defined at least in part in terms of the method or process by which it is made.” *Nuijten*, 500 F.3d at 1355 (quoting *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1315 (Fed. Cir. 2006)). Such claims are for example used for chemical compositions, where describing the process of making the same is more feasible than describing the structure of the resulting composition. See *SmithKline*, 439 F.3d at 1315.

the three-member panel, explains that a “manufacture” has to be some sort of “tangible article[] or commodit[y].”¹¹¹ A transient signal that could be “encoded on an electromagnetic carrier and transmitted through a vacuum—a medium that, by definition, is devoid of matter,” did not qualify.¹¹² Dissenting Judge Linn saw it differently.¹¹³ In the spirit of “anything under the sun that is made by man,” he sees no tangibility requirement for “manufacture,” and since the claimed signal was also “new” and “useful,” it passed section 101 in Judge Linn’s view.¹¹⁴

This year, *State Street* faced further scrutiny: In February, the Federal Circuit granted a re-hearing, *en banc*, in *In re Bilksi*,¹¹⁵ an appeal from the Patent and Trademark Office’s Board of Patent Appeals and Interferences’ final rejection of a patent application for a financial “method of managing the consumption risk costs associated with a commodity sold at a fixed price, . . . , for example, . . . energy.”¹¹⁶ The full panel addressed the questions of (i) whether such method is patentable under section 101, (ii) what standard should govern patentability under section 101, (iii) whether the method at issue constitutes an abstract idea or mental process and when a claim that contains mental and physical steps constitutes patentable subject matter, (iv) whether a patentable method or process must result in physical transformation or be tied to a machine, and (v) whether to reconsider *State Street* (and *AT&T Corp.*).¹¹⁷ Forty amicus briefs were filed by many prominent entities too numerous to list them all here.

My prediction at the time was that the Supreme Court’s holdings in *eBay*, *KSR*, and *MedImmune*, overruling or limiting more stringent, and arguably pro-patent, tests established by the Federal Circuit, combined with Justices Kennedy’s and Breyer’s comments in *eBay* and *Metabolite*, respectively, suggested hostility toward the *State Street* holding,¹¹⁸ and may cause the Federal Circuit to further limit or

¹¹¹ *Nuijten*, 500 F.3d at 1356.

¹¹² *Id.* at 1357.

¹¹³ *See id.* at 1358-69 (Linn, J., dissenting).

¹¹⁴ *See id.* at 1358-59 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).

¹¹⁵ 264 Fed. Appx. 896, 897 (Fed. Cir. 2008).

¹¹⁶ Brief of Appellants at 3, *In re Bilski*, 264 Fed. Appx. 896, 897 (Fed. Cir. 2008) (No. 2007-1130). It is notable that the method at issue in *State Street* was a financial method as well, namely a “[d]ata processing system for hub and spoke financial services configuration.” *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1370 (Fed. Cir. 1998); *see also* U.S. Patent No. 5,193,056 (filed Mar. 11, 1991).

¹¹⁷ *Bilski*, 264 Fed. Appx. at 897.

¹¹⁸ *See eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 395-97 (2006) (Kennedy, J., concurring); *Lab. Corp. of Am. Holdings v. Metabolite Lab., Inc.*, 548 U.S. 124, 136-37 (2006) (Breyer, J., dissenting).

qualify *State Street*¹¹⁹ to preempt another overruling by the High Court. And indeed, on October 30, 2008, the Federal Circuit issued its *en banc* opinion in *In re Bilski*¹²⁰ and did exactly that.

When considering whether Bilski's financial risk management method fit into any of the subject matter categories of section 101, the court determined by method of exclusion that the claims were "not directed to a machine, manufacture, or composition of matter," and the issue was, therefore, whether they fit within the meaning of the term "process" as found in section 101.¹²¹ Relying on *Flook, Diehr*, and *Benson*, the court held that the meaning of "process" within section 101 is narrower than the ordinary meaning of the word, namely excluding processes that claim "laws of nature, natural phenomena, [or] abstract ideas."¹²² Honing in on *Diehr*, the court then clarified that unpatentable processes are those that "seek to pre-empt the use of" a fundamental principle," as opposed to "claims that seek only to foreclose others from using a particular 'application' of that fundamental principle."¹²³ This, the court said, is "[t]he question before us"¹²⁴

To resolve this question of "whether [a] claim recites a fundamental principle and, if so, whether it would pre-empt substantially all uses of that fundamental principle," the court turned to the Supreme Court's "machine-or-transformation test," which had been established in *Benson*.¹²⁵ Specifically, the test asks whether "(1) [the process] is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing."¹²⁶ The Federal Circuit explained:

A claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different

¹¹⁹ Cf. *In re Comiskey*, 499 F.3d 1365, 1374-77 (Fed. Cir. 2007); *Nuijten*, 500 F.3d at 1353-54.

¹²⁰ See *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008).

¹²¹ See *id.* at 951.

¹²² *Id.* at 952 (quoting *Diamond v. Diehr*, 450 U.S. 175, 185 (1981) (citing *Parker v. Flook*, 437 U.S. 584, 588-89 (1978) and *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972))).

¹²³ *Id.* at 953 (quoting *Diehr*, 450 U.S. at 187).

¹²⁴ *Id.* at 954.

¹²⁵ See *id.* at 954-60 (citing *Benson*, 409 U.S. at 70).

¹²⁶ *Id.* at 954 (citing *Benson*, 409 U.S. at 70).

state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article.¹²⁷

The court applied this principle to show why the process claim in *Diehr* was patentable—“operat[ing] on a computerized rubber curing apparatus and transform[ing] raw, uncured rubber into molded, cured rubber products,” and, therefore, “me[eting] both criteria”¹²⁸—while the alarm limit calculation in *Flook* was neither “tied to any specific machine or apparatus” nor “limited to any particular chemical (or other) transformation,” and, therefore, unpatentable.¹²⁹ However, the court also cautioned that, when applying the test, one must also consider whether these limitations are actually limiting: pointing to the facts of *Benson*, the Federal Circuit showed that mindless application of the test could have led to the conclusion that since the claimed binary-coded decimal numbers to pure binary numbers conversion process was technically tied to a digital computer, i.e., a specific machine or apparatus, and, therefore, patentable.¹³⁰ But since the process had no application other than on a digital computer, it would have pre-empted the fundamental principle regardless, and was, therefore, really unpatentable.¹³¹

After discussing, and relying on, Supreme Court precedence, the Federal Circuit eventually takes an ax to some of its own prior holdings, including *State Street*.¹³² At first, the court seems to affirm *State Street*, insofar as it confirms that the *Freeman-Walter-Abele* test is “inadequate” to determine patentability of processes,¹³³ which *State Street* had found as well.¹³⁴ Indeed, *Bilski* also “reaffirm[s]” the holding of *State Street* that “the so-called ‘business method exception’ was unlawful.”¹³⁵

However, then, the Federal Circuit discards the “useful, concrete, and tangible result” test, which had been established in

¹²⁷ *Id.*

¹²⁸ *See id.* (citing *Diehr*, 450 U.S. at 187).

¹²⁹ *See id.* at 955 (citing *Parker v. Flook*, 437 U.S. 584, 586, 595 (1978)).

¹³⁰ *See id.* (citing *Benson*, 409 U.S. at 71-72).

¹³¹ *See id.*

¹³² *See id.* at 959.

¹³³ *See id.*

¹³⁴ *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998).

¹³⁵ *See Bilski*, 545 F.3d at 960.

Alappat, and on which *State Street* and also *AT&T* had relied, as “inadequate.”¹³⁶ Hedging with regard to the purpose of these prior holdings, the court provides that “looking for ‘a useful, concrete and tangible result’ may in many instances provide useful indications of whether a claim is drawn to a fundamental principle or a practical application of such principle,” but cautions that this inquiry alone “is insufficient to determine whether a claim is patent-eligible under section 101.”¹³⁷ The court explains that this test “was certainly never intended to supplant the Supreme Court’s test” and reaffirms the Supreme Court’s “machine-or-transformation test” as “the proper test to apply” instead.¹³⁸

Finally, with regard to its prior holding in *Comiskey*, the Federal Circuit clarifies that any interpretation of that decision that it “applied a new section 101 test that bars any claim reciting a mental process that lacks significant ‘physical steps,’” was incorrect.¹³⁹ Instead, the court had “simply recognized that the Supreme Court has held that mental processes, like fundamental principles, are excluded by section 101,” and *Comiskey* “actually applied the machine-or-transformation test”¹⁴⁰

V. Conclusion

After twenty-five years of arguable broadening of patent owner rights by the Federal Circuit, the Supreme Court has initiated a reversal of the trend, and the Federal Circuit has acknowledged this trend. After the Federal Circuit arguably broadened patentability under section 101 to include all inventions with practical utility that produce a “useful, concrete and tangible result,”¹⁴¹ regardless of which and how they fit into any of the enumerated categories of process, machine, manufacture or composition of matter,¹⁴² arguably treating these enumerated categories as mere examples,¹⁴³ we are now back to the 1972 *Benson* “machine or transformation test.”¹⁴⁴ However, by

¹³⁶ See *id.* at 959-60 (citing *State Street*, 149 F.3d at 1373; *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994); *AT&T Corp. v. Excel Cmmc’ns, Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1999)).

¹³⁷ See *id.* at 959.

¹³⁸ *Id.* at 959-60.

¹³⁹ See *id.* at 960; cf. Seidenberg, *supra* note 6, at 15.

¹⁴⁰ *Bilksi*, 545 F.3d at 960.

¹⁴¹ See *State Street*, 149 F.3d at 1374-75.

¹⁴² See *id.*; cf. 35 U.S.C. § 101 (2006).

¹⁴³ See Seidenberg, *supra* note 7, at 15.

¹⁴⁴ See *Bilksi*, 545 F.3d at 954-60 (citing *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)).

also relying on *Diehr*,¹⁴⁵ which originally made way to the patenting of computer programs,¹⁴⁶ and by reaffirming that there is no “business method exception,”¹⁴⁷ business methods and mathematical algorithms should still be patentable under the following conditions:

Section 101 requires not only that a patentable invention must have “practical utility,” but it also must fall into the patentable categories of “process, machine, manufacture, or composition.”¹⁴⁸ The invention does not have to neatly fit into one single category—for example, it may be considered both a machine and a process at the same time.¹⁴⁹ But the invention must still fit within the sum of the scope carved out by the enumerated categories of patentable subject matter together, i.e., it must be “within *at least one* category,” but it may arguably fall within more than one.¹⁵⁰ For example, “a claim that involves both a mental process and one of the other categories of statutory subject matter [. . .] may be patentable.”¹⁵¹

Hence, computer programs and mathematical algorithms should still be patentable inventions as part of a machine if they limit a general purpose computer to a special purpose “machine,”¹⁵² thereby being tied to a machine,¹⁵³ or if they effect a “transformation” of another patentable category, e.g., a “manufacture” or “composition of matter.”¹⁵⁴

In other words, to the extent they ever truly existed, the days of any business method or algorithm, even with practical utility, being patentable by itself may be over. However, patenting computer programs that implement such a method or algorithm, thereby limiting a general purpose computer to a special purpose *machine*, should still be possible. And if the method or algorithm can be linked in such way to a manufacture or composition (instead of a machine) that the invention meets the “transformation test,” then such combination should constitute patentable subject matter as well. One way a method

¹⁴⁵ See *id.* at 952-58.

¹⁴⁶ See *Diamond v. Diehr*, 450 U.S. 175, 187 (1981).

¹⁴⁷ See *Bilski*, 545 F.3d at 960.

¹⁴⁸ 35 U.S.C. § 101 (2006); see also *In re Nuijten*, 500 F.3d 1346, 1353-54 (Fed. Cir. 2007).

¹⁴⁹ *Nuijten*, 500 F.3d at 1354.

¹⁵⁰ *Id.* (emphasis added).

¹⁵¹ *In re Comiskey*, 499 F.3d 1365, 1377 (Fed. Cir. 2007).

¹⁵² See *In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994); *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1348-49 (Fed. Cir. 1999).

¹⁵³ See *Bilski*, 545 F.3d at 954-60 (citing *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)).

¹⁵⁴ See *id.*

or algorithm can be linked to a manufacture or composition is if it
“change[s] materials to a different state.”¹⁵⁵

* * *

¹⁵⁵ See Seidenberg, *supra* note 7, at 15 (citation omitted); see also *Comiskey*, 499 F.3d at 1375 n.10, 1377.