
No. 2007-1130
(Serial No. 08/833,892)

**United States Court of Appeals
for the Federal Circuit**

IN RE BERNARD L. BILSKI AND RAND A. WARSAW

Appeal from the United States Patent and Trademark Office,
Board of Patent Appeals and Interferences

**BRIEF OF *AMICUS CURIAE*
INTERNATIONAL BUSINESS MACHINES CORPORATION
IN SUPPORT OF NEITHER PARTY**

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April 7, 2008

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

In re Bernard L. Bilski and Rand A. Warsaw v. _____

No. 2007-1130

CERTIFICATE OF INTEREST

Counsel for the (petitioner) (appellant) (respondent) (appellee) (amicus) (name of party)

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International Business Machines Corporation (IBM) respectfully submits this brief as *amicus curiae* in support of neither party.

INTEREST OF *AMICUS CURIAE*

IBM is a globally recognized leader in the field of information technology research, development, design, manufacturing, and related services. During the company's nearly 100-year history, its employees have included five Nobel laureates, five National Medal of Science recipients, and seven winners of the National Medal of Technology. The United States Patent and Trademark Office (USPTO) has granted IBM tens of thousands of patents, including more patents than any other assignee for the past fifteen years. IBM is also the top-ranked assignee for patents issued in the USPTO classification that includes business methods.

In light of its sizeable patent portfolio and diverse business interests, IBM has a compelling interest in the development of clear and consistent rules governing subject matter patentability. IBM has frequently been involved in patent litigation, both as a patentee seeking to enforce its patent rights and as an accused infringer seeking to defend itself, and thus believes that it can provide a balanced view on

these important issues. IBM is committed to maintaining the integrity of the United States patent system, and assuring that the statutory standard for patentability is defined in a manner consistent with established principles of law.

INTRODUCTION AND SUMMARY OF ARGUMENT

For well over a century, the Supreme Court has made it clear that the scope of patent eligible subject matter includes processes and methods. Congress formally codified that settled legal understanding in 1952 by incorporating the word “process” into § 101 of the patent statute, which defines the scope of patentable subject matter. The meaning of the word “process” in § 101, thus, is informed by judicial precedent from before and after the enactment of the 1952 statute.

IBM respectfully submits that the gravamen of that precedent, as informed by the constitutional objective of “promot[ing] the Progress of Science and useful Arts,” is that a patentable “process” within the meaning of § 101 is one that involves a technological contribution—namely, a process that either (i) is tied to a particular machine or apparatus, or (ii) causes transformation or reduction of an article to a different state or thing, and in either instance produces technologically

beneficial results. This test sets forth a reasonable and balanced standard for subject matter eligibility.

The foregoing synthesis of the relevant precedents, IBM further submits, is consistent with this Court's holdings on this issue, including those of *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) and *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999). Accordingly, this Court need not overrule either of those cases. However, *State Street* and *AT&T* should be clarified to limit the scope of patent eligible processes to those that involve technological contributions. Some have read isolated language in *State Street* to suggest the contrary, *i.e.*, that utility alone is the touchstone for patentable subject matter. That suggestion is incorrect. Accordingly, this Court can and should now repudiate that suggestion and clarify that inventions which do not involve technological contributions are outside the scope of patentable subject matter.

Finally, no sound patent policy supports patent protection for non-technological processes, including non-technological business methods. Patent-based incentives are simply not needed to spur business method innovation. To the contrary, allowing non-technological business

methods to be patented would only stifle competition without promoting innovation.

**STATEMENT OF THE ISSUES
ADDRESSED BY *AMICUS CURIAE***

Amicus curiae IBM addresses the following questions presented by the Court in its February 15, 2008 order: ¹

“2. What standard should govern in determining whether a process is patent-eligible subject matter under section 101?

* * *

4. Whether a method or process must result in a physical transformation of an article or be tied to a machine to be patent-eligible subject matter under section 101?

5. Whether it is appropriate to reconsider *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352

¹ As an *amicus* supporting neither party, IBM takes no position on Questions 1 and 3, which relate to the merits of this particular case. To the extent that Question 3 extends beyond the merits of this particular case, IBM submits that the answer to that Question is subsumed by the answer to Question 2.

(Fed. Cir. 1999), in this case and, if so, whether those cases should be overruled in any respect?”

ARGUMENT

I. Patent Eligible Subject Matter For Processes Should Be Limited To Processes That Involve Technological Contributions. (Questions 2 & 4)

The United States Constitution specifically empowers Congress “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to ... Inventors the exclusive Right to their ... Discoveries,” U.S. Const. art. I, § 8, cl. 8, and Congress responded by enacting a patent statute as early as 1790, *see, e.g., Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996). Since the most recent general revision of the patent laws in 1952, the scope of patent eligible subject matter has extended to “any new and useful *process*, machine, manufacture, or composition of matter.” 35 U.S.C. § 101 (emphasis added).

A. Supreme Court Cases Before 1952 Provide Context For Understanding The Meaning Of “Process” In § 101.

Congress incorporated the word “process” into the statute as part of the 1952 revision and defined that word simply as a “process, art, or method, ... includ[ing] a new use of a known process, machine,

manufacture, composition of matter, or material.” 35 U.S.C. § 100(b). However, Congress in 1952 was not writing on a blank slate. To the contrary, for a century before then, the Supreme Court had made it clear that patent protection could extend to processes. “Although the term ‘process’ was not added to 35 U.S.C. § 101 until 1952 a process has historically enjoyed patent protection because it was considered a form of ‘art’ as that term was used in the 1793 Act.” *Diamond v. Diehr*, 450 U.S. 175, 182 (1981).²

The Supreme Court had made it clear long before 1952 that not *all* processes can be patented. Thus, in *O’Reilly v. Morse*, 56 U.S. (15 How.)

² See also *Tilghman v. Proctor*, 102 U.S. 707, 722 (1881) (“A manufacturing process is clearly an art, within the meaning of the law.”); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1877) (“That a process may be patentable ... cannot be disputed. ... In the language of the patent law, it is an art.”); *Corning v. Burden*, 56 U.S. (15 How.) 252, 267 (1854) (“A process, *eo nomine*, is not made the subject of a patent in our act of Congress. It is included under the general term ‘useful art.’”); S. Rep. No. 82-1979, at 5 (1952), reprinted in 1952 U.S.C.C.A.N. 2394 (“Th[e] language [of the predecessor provision to § 101] has been preserved except that the word ‘art’ which appears in the present statute has been changed to the word ‘process.’”); P.J. Frederico, *Commentary on the New Patent Act* (1954), reprinted in 75 J. Pat. & Trademark Off. Soc’y 161, 176 (“The word ‘art’ in the corresponding section of the old statute had been interpreted by the courts as being practically synonymous with process or method,”).

62 (1854), the Supreme Court revoked Samuel Morse’s eighth claim, which sought to patent the process of transmitting messages using an electromagnetic current, untethered to any particular machine or practical application. *See id.* at 112. As the Court explained, that claim was “not warranted by law” because it would protect, and thereby prevent use of, all conceivable solutions to accomplish the recited result. *Id.* at 113. Thus, Morse was entitled to a patent only for the specific practical application of electromagnetism that he actually invented: “[H]e has not discovered that the electro-magnetic current, used as motive power, in any other method, and with any other combination, will do as well.” *Id.* at 117; *see also Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874) (“An idea of itself is not patentable, but a new device by which it may be made practically useful is.”); *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1853) (“A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.”).³

³ The lower courts routinely applied these bedrock principles in the years preceding the enactment of the 1952 statute. *See, e.g., Joseph E.* (Continued...)

When Congress incorporated the word “process” into § 101 in 1952, it was acting against the backdrop of these precedents that limited the kinds of processes subject to patent protection. Under these circumstances, the normal presumption is that Congress sought to ratify, rather than overturn, this prevailing legal understanding. *See,*

Seagram & Sons, Inc. v. Marzall, 180 F.2d 26, 27-28 (D.C. Cir. 1950) (methods of testing products to assess consumer reactions and preferences not patentable); *Loew’s Drive-in Theatres, Inc. v. Park-In Theatres, Inc.*, 174 F.2d 547, 553 (1st Cir. 1949) (method of arranging automobiles at a drive-in theater not patentable); *In re Patton*, 127 F.2d 324, 327-28 (C.C.P.A. 1942) (method of fighting fires using standardized and interchangeable fire fighting equipment not patentable because “a system of transacting business, apart from the means for carrying out such system, is not within [the patent statute], nor is an abstract idea or theory, regardless of its importance or the ingenuity with which it was conceived, apart from the means for carrying such idea or theory into effect, patentable subject matter”); *In re Wait*, 73 F.2d 982, 982-83 (C.C.P.A. 1934) (method of buying and selling stocks, wherein one party advertised offer, another party accepted offer and such transaction was recorded, not patentable); *Hotel Sec. Checking Co. v. Lorraine Co.*, 160 F. 467, 469-72 (2d Cir. 1908) (method of “cash-registering and account-checking” not patentable as a “system of transacting business disconnected from the means for carrying out the system ...”); *Ex Parte Turner*, 1894 Dec. Comm’r Pat. 36, 36-37 (method of securing reading of advertisements not patentable because, *inter alia*, process carried no physical effect; “a plan or theory of action which, if carried into practice, could produce no physical results proceeding direct from the operation of the theory or plan itself is not an art within the meaning of the patent laws.”); *Ex Parte Abraham*, 1869 Dec. Comm’r Pat. 59 (method of detecting and preventing tax evasion by employing stamps to be severed upon attachment to an article not patentable).

e.g., *Nationwide Mut. Ins. Co. v. Darden*, 503 U.S. 318, 322 (1992); *Cottage Sav. Ass’n v. C.I.R.*, 499 U.S. 554, 562 (1991); *Davis v. Michigan Dep’t of Treasury*, 489 U.S. 803, 813 (1989); *Shapiro v. United States*, 335 U.S. 1, 16 & n.21 (1948). Nothing in the text or history of the 1952 statute suggests that Congress intended to extend patent protection to any process that previously had not been subject to such protection. *See, e.g., Diehr*, 450 U.S. at 184 (“Analysis of the eligibility of a claim of patent protection for a ‘process’ did not change with the addition of that term to § 101.”); *In re Comiskey*, 499 F.3d 1365, 1375 (Fed. Cir. 2007) (“[T]he Supreme Court has made clear that the 1952 language change had no substantive effect.”).

B. Supreme Court Cases After 1952 Reinforce The Traditional Meaning Of “Process.”

The Supreme Court has further refined the meaning of “process” in the years since 1952. In *Gottschalk v. Benson*, 409 U.S. 63 (1972), the Court held that a claimed “method for converting binary-coded decimal (BCD) numerals into pure binary numerals” was not eligible for patenting. *Id.* at 64. As the Court explained, the claimed process was not “limited to any particular art or technology, to any particular apparatus or machinery, or to any particular end use,” but rather

“purported to cover any use of the claimed method in a general-purpose digital computer of any type.” *Id.* Under these circumstances, the process was not patent eligible: “Transformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.” *Id.* at 70 (quoting *Cochrane v. Deener*, 94 U.S. 780, 788 (1977)); *see also Comiskey*, 499 F.3d at 1376 (“[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. 35 U.S.C. § 101.”).

Similarly, in *Parker v. Flook*, 437 U.S. 584 (1978), the Court held that a claimed method for computing an “alarm limit” on any process variable involved in the catalytic chemical conversion of hydrocarbons was not patentable. *See id.* at 594-96. As the Court explained, the claimed process simply provided a formula for computing an updated alarm limit, but did not specify how to “select the appropriate margin of safety, the weighing factor, or any of the other variables ... [n]or [did] it

... 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.” *Id.* at 586. The Court noted that an inventive application of a mathematical formula, principle, or phenomenon of nature may be patented, but only if “there is some other inventive concept in its application.” *Id.* at 594.

Finally, in *Diehr*, the Court held that a claimed “process for molding raw, uncured synthetic rubber into cured precision products” was patent eligible because the “claims were not directed to a mathematical algorithm or an improved method of calculation but rather recited an improved process for molding rubber articles by solving a practical problem which had arisen in the molding of rubber products.” *Id.* at 177, 181. As the Court explained, “when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101.” *Id.* at 192.

As the foregoing precedents make clear, the issue before this Court is not the theoretical outer boundaries of the word “process.” Rather, the issue is the meaning of the word “process” as used in § 101 and informed by precedent going back well over a century—both before and after the enactment of the 1952 statute. *See, e.g., Diehr*, 450 U.S. at 181-84 (addressing meaning of word “process” in § 101 by reference to precedents dating back to *Morse* and even earlier); *Flook*, 437 U.S. at 588-89 (same); *Benson*, 409 U.S. at 64 (same); *see also Laboratory Corp. of Am. Holdings v. Metabolite Labs., Inc.*, 126 S. Ct. 2921, 2922-23, 2926-28 (2006) (Breyer, J., joined by Stevens and Souter, JJ., dissenting) (same).

C. The Gravamen Of The Supreme Court’s Precedent Is That Subject Matter Patentability Is Restricted To Inventions That Involve Technological Contributions.

IBM respectfully submits that the Supreme Court’s precedents in this area can be synthesized (and Questions 2 and 4 presented by the *en banc* Court in this case can be answered) by recognizing that a patentable “process” under § 101 must involve a technological contribution. More specifically, such a process must either (i) be tied to a particular machine or apparatus, *see, e.g., Benson*, 409 U.S. at 70-71,

or (ii) cause transformation or reduction of an article to a different state or thing, *see, e.g., Diehr*, 450 U.S. at 182-84; *Tilghman v. Proctor*, 102 U.S. 707, 722 (1881); *Cochrane*, 94 U.S. at 787-88; *Corning v. Burden*, 56 U.S. (15 How.) 252, 267-68 (1854), and in either instance produce technologically beneficial results. Processes without such technological contributions are properly outside the scope of § 101.

The requirement that a patented process be one that produces technologically beneficial results ensures that the technological aspect of the process is not ancillary or incidental, and thus prevents clever drafters from seeking to patent a non-technological method through nominal or token recitations of structure in a method claim. *See, e.g., Diehr*, 450 U.S. at 191-92 (“[I]nsignificant post-solution activity will not transform an unpatentable principle into a patentable process.”); *Comiskey*, 499 F.3d at 1380 (“[T]he mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter.”).

This standard applies not only to processes, but more generally limits patentable subject matter to inventions that involve a technological contribution. *See, e.g., David J. Kappos et al., A*

Technological Contribution Requirement for Patentable Subject Matter: Supreme Court Precedent and Policy, 6 Nw. J. Tech. & Intell. Prop. 152 (2008), available at <http://www.law.northwestern.edu/journals/njtip/v6/n2/1/>. The standard sets forth a reasonable and balanced test for subject matter eligibility, and comports with numerous cases referring to patents as properly directed toward “technology” and “technological growth and industrial innovation.”⁴

In synthesizing the Supreme Court precedents, IBM recognizes that the Supreme Court has used language suggesting that the “technological contribution” standard may not be a rigid rule, but rather more akin to a presumption: “We do not hold that no process patent

⁴ See, e.g., *Benson*, 409 U.S. at 64 (“The claims were not limited to any particular art or *technology*, to any particular apparatus or machinery, or to any particular end use.”) (emphasis added); *Diehr*, 450 U.S. at 184 (“*Industrial processes* ... have historically been eligible to receive the protection of our patent laws.”) (emphasis added); *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998) (“[T]he patent system ... encourages both the creation and the public disclosure of new and useful advances in *technology* ...”) (emphasis added); *Markman*, 517 U.S. at 390 (“Congress created the Court of Appeals for the Federal Circuit as an exclusive appellate court for patent cases, ... observing that increased uniformity would ‘strengthen the United States patent system in such a way as to foster *technological growth and industrial innovation.*’”) (emphasis added; citation omitted).

could ever qualify [for patent protection] if it did not meet the requirements of our prior precedents.” *Benson*, 409 U.S. at 71. However, in the intervening years, no situation has been presented to the Supreme Court to justify overcoming this presumption. IBM believes that the “technological contribution” standard set forth above is sufficiently flexible to allow appropriate patent protection for new fields of scientific or technological discovery, while excluding those processes that the patent law was not designed to protect. In addition, this standard is subject to the well-settled principle that patentable subject matter does not include “laws of nature, natural phenomena, and abstract ideas.” *Diehr*, 450 U.S. at 185; *see also Comiskey*, 499 F.3d at 1376 (“Abstract ideas’ are one type of subject matter that the Supreme Court has consistently held fall beyond the broad reaches of patentable subject matter under § 101.”).

The “technological contribution” standard, moreover, brings the word “process” in § 101 squarely in line with the Constitution, and avoids the constitutional problems raised by a more open-ended interpretation of that word. The Constitution empowers Congress to enact patent laws “to promote the Progress of Science and useful Arts.”

U.S. Const. art. I, § 8, cl. 8. As this Court recently explained, the Constitution thereby “explicitly limited patentability to ‘the national purpose of advancing the useful arts—the process today called technological innovation.’” *Comiskey*, 499 F.3d at 1375 (quoting *Paulik v. Rizkalla*, 760 F.2d 1270, 1276 (Fed. Cir. 1985) (*en banc*)); *In re Bergy*, 596 F.2d 952, 959 (C.C.P.A. 1979) (“We have previously pointed out that the present day equivalent of the term ‘useful arts’ employed by the Founding Fathers is ‘technological arts.’”) (citing *In re Musgrave*, 431 F.2d 882, 893 (C.C.P.A. 1970); *In re Waldbaum*, 457 F.2d 997, 1003-04 (C.C.P.A. 1972) (Rich, J., concurring)); Karl B. Lutz, *Patents & Science*, 18 Geo. Wash. L. Rev. 50, 54 (1949) (“The term ‘useful arts,’ as used in the Constitution ... is best represented in modern language by the word ‘technology.’”).⁵

⁵ See also Tench Coxe (Delegate to the 1787 Constitutional Convention from Pennsylvania), *An Address to an Assembly of the Friends of American Manufactures: Convened for the Purpose of Establishing a Society for the Encouragement of Manufactures and the Useful Arts*, 17-18 (R. Aitkin & Son 1787); Alexander Hamilton, *The Reports of Alexander Hamilton: Report On Manufactures* (Dec. 5, 1791) 115-16, 175-76 (Jacob E. Cooke ed., Harper & Row 1964) (praising the patent system as a way of encouraging manufacturing industries and “[inventions] which relate to machinery”).

By clarifying that the scope of patent eligible processes is limited to those processes that involve technological contributions, as opposed to processes that may be merely “useful” in some abstract sense, this Court can address the concerns raised by the Justices in *Metabolite* who dissented from the dismissal of the writ of certiorari as improvidently granted, and bring needed balance and clarity to the United States patent system.⁶ Processes that do not involve technological contributions should be held outside the scope of § 101.

II. *State Street* And *AT&T* Should Be Clarified To Limit The Scope Of Patent Eligible Processes To Those That Involve Technological Contributions. (Question 5)

The gravamen of the foregoing precedents is that non-technological business methods, and other non-technological processes, are not patent eligible subject matter. That point has been called into question, however, by an overly expansive interpretation of language in this Court’s *State Street* decision. The result has been an explosion of

⁶ The “technological contribution” standard described in this brief is a synthesis of the requirements for subject matter patentability under United States patent law, and is not drawn from the patentability standards of any non-United States jurisdiction, including the technicity, technological contribution, or technical effect requirements for patentable subject matter in other countries.

business method patents of dubious validity. The time has come for this Court to clarify *State Street*, and to rein in the runaway issuance of non-technological process patents under § 101. See, e.g., *Metabolite*, 126 S. Ct. at 2922-23, 2926-28 (Breyer, J., joined by Stevens and Souter, JJ., dissenting from dismissal of writ of certiorari as improvidently granted); *eBay Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837, 1842 (2006) (Kennedy, J., joined by Stevens, Souter, and Breyer, JJ., concurring) (noting with concern “the burgeoning number of patents over business methods”).

This Court’s holding in *State Street* can be justified as consistent with the principles discussed above. The patent at issue in that case involved a “machine,” not a “process.” See 149 F.3d at 1371 (“When independent claim 1 is properly construed ..., it is directed to a machine ...”); *id.* at 1372 (“[C]laim 1, properly construed, claims a machine ...”). There is no doubt, the Court explained, that “[a] ‘machine’ is proper statutory subject matter under § 101.” *Id.*⁷ The *State Street* Court

⁷ Whether the claim at issue in *State Street* would have been patentable if recited as a process rather than as specific machinery has not been addressed by this, or any other, Court.

further explained that “certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, i.e., ‘a useful, concrete and tangible result.’” *Id.* at 1373 (quoting *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994) (*en banc*) (Rich, J.)); *see also id.* (“[M]erely abstract ideas constituting disembodied concepts or truths ... are not ‘useful.’”). In context, and in view of precedent, it is clear that the Court was using the term “useful” to mean having “some type of practical application,” and thus contrasting “useful” with “abstract.” *See also Alappat*, 33 F.3d at 1542 n.18 (“[A]bstract ideas constitute disembodied concepts or truths which are not ‘useful’ from a practical standpoint standing alone, i.e., they are not ‘useful’ until reduced to some practical application.”). As in the statute itself, this utility requirement is separate from the question of the proper statutory category of the invention. *State Street*, 149 F.3d at 1372, 1375 (noting that the claim recited a machine which both included “specific structure” and *also* “produce[d] a ‘useful, concrete and tangible result.’”); *see also Comiskey*, 499 F.3d at 1377 & n.14 (noting that this Court “ha[s] found processes involving mathematical algorithms used in computer technology patentable

because they claimed practical applications and were tied to specific machines.”).

Similarly, this Court’s holding in *AT&T* is consistent with the foregoing principles. At issue in that case was a process for generating and using a message record for long-distance telephone calls that is enhanced by adding a primary interchange carrier (“PIC”) indicator. 172 F.3d at 1353. The addition of the PIC indicator helped long-distance carriers to provide differential billing treatment for subscribers, depending upon whether a subscriber called someone with the same or a different long-distance carrier. *See id.* As this Court explained, the claimed process “employs subscribers’ and call recipients’ PICs as data, applies Boolean algebra to those data to determine the value of the PIC indicator, and applies that value through switching and recording mechanisms to create a signal useful for billing purposes.” *Id.* at 1358. The process was thus tied to a machine to achieve a technologically beneficial result, and the Court’s holding was warranted by precedent.

Thus, in neither *State Street* nor *AT&T* did this Court hold that anything that is “useful” in any sense of that word—including the

colloquial sense of having any utility whatsoever—is patentable. *See generally Comiskey*, 499 F.3d at 1377 & n.14 (noting that the inventions at issue in both *State Street* and *AT&T* were patentable precisely “because they claimed practical applications and were tied to specific machines”).⁸ Accordingly, the answer to Question 5 presented by the *en banc* Court in this case is that this Court need not overrule the holdings of either *State Street* or *AT&T*.

⁸ Indeed, none other than Judge Rich (the author of *State Street* and *Alappat*, and one of the principal drafters of the 1952 Patent Act) recognized in an oft-quoted comment that abstract ideas may be useful, but that does not mean that they are patentable:

Invaluable though it may be to individuals, the public, and national defense, the invention of a more effective organization of the materials in, and the techniques of teaching a course in physics, chemistry, or Russian is not a patentable invention because it is outside of the enumerated [statutory] categories Also outside that group [of patentable inventions] is one of the greatest inventions of our times, the diaper service.

Giles S. Rich, *Principles of Patentability*, 28 Geo. Wash. L. Rev. 393, 393-94 (1960); *see also In re Yuan*, 188 F.2d 377, 380 (C.C.P.A. 1951) (explaining that the incorporation of the term “useful Arts” in the Constitution “doubtlessly was due to the fact that those who formulated the Constitution were familiar with the long struggle over monopolies so prominent in English history, where exclusive rights to engage even in ordinary business activities were granted so frequently by the Crown.”).

Some observers, however, have broadly read *State Street* to stand for the proposition that utility alone is the touchstone for patentability. That proposition is untenable. To the contrary, whether particular subject matter is patentable (*i.e.*, whether it is a “process, machine, manufacture, or composition of matter” under § 101) is a separate inquiry from whether the claimed invention is useful (*i.e.*, whether it meets the *separate* utility requirement of § 101). *See, e.g., Flook*, 437 U.S. at 584-88 (holding that “a novel and useful mathematical formula” could not be patented); *State Street*, 149 F.3d at 1375 n.9 (“Of course, the subject matter must fall into at least one category of statutory subject matter.”). The broad reading of *State Street*, however, has led to an explosion of patents for non-technological methods. Issued patents from such diverse areas as architecture, athletics, painting, psychology, and the law itself, reveal just how far afield the patent system has gone in granting proprietary rights in virtually any area of human endeavor, such as teaching a golf putting stroke or a method for lifting a box.⁹

⁹ *See, e.g.*, U.S. Patents Nos. 5,498,162 (“Method For Demonstrating a Lifting Technique”), 6,447,403 (“Method and Apparatus for Improving Putting Skill”), 5,190,458 (“Character Assessment Method”), 5,809,484 (“Method and Apparatus For Funding Education By Acquiring Shares (Continued...)”).

Indeed, the three Supreme Court Justices who dissented from the dismissal of the writ of certiorari as improvidently granted in *Metabolite* noted their disagreement with *State Street* to the extent it “say[s] that a process is patentable if it produces a ‘useful, concrete, and tangible result.’” *Metabolite*, 126 S. Ct. at 2928 (Breyer, J., joined by Stevens and Souter, JJ., dissenting) (quoting *State Street*, 149 F.3d at 1373)). As these Justices explained, “if taken literally, the statement [in *State Street*] would cover instances where this Court has held the contrary.” *Id.* (citing *Morse*, *Flook*, and *Benson*). As noted above, *State Street* did not hold that utility alone is the touchstone for patentability, and this Court can and should now clarify that non-technological processes (no matter how useful) are not patentable.

Such clarification is entirely consistent with a robust notion of patentable subject matter. Diverse industries have contributed numerous technological advances that are unquestionably suitable for patenting. The USPTO has, for example, appropriately awarded

of Students Future Earnings”), 6,213,778 (method of painting a surface using the posterior of an infant), and 6,607,389 (method for making jury selection determinations).

patents in the pharmaceutical, biotechnology, computer/electronics, biomedical, financial, mechanical, and other important fields and important technological advances in these fields have been recognized by this Court and the Supreme Court as patentable subject matter.¹⁰ Thus, clarifying that *State Street* does not support the patentability of non-technological methods will reaffirm, not undermine, patent protection for technological innovations.

III. No Sound Innovation Policy Supports Patents On Non-Technological Business Methods. (Questions 2, 4 & 5)

Finally, no sound innovation policy supports extending patent protection to non-technological business methods or other non-

¹⁰ See, e.g., *Diamond v. Chakrabarty*, 447 U.S. 303, 310 (1980) (affirming the patentability of “a new bacterium with markedly different characteristics from any found in nature and one having the potential for significant utility”); *Alappat*, 33 F.3d at 1545 (“We have held that [software] creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.”); see also *AT&T*, 172 F.3d at 1360 (“[I]t is now clear that computer-based programming constitutes patentable subject matter so long as the basic requirements of § 101 are met.”); *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1339 (Fed. Cir. 2005) (“[P]rocess and product—software and hardware—are practically interchangeable in the field of computer technology. On a functioning
(Continued...)”)

technological processes. As the Supreme Court has stated time and again, “the patent system represents a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time.” *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998); *see also id.* (“The balance between the interest in motivating innovation and enlightenment by rewarding invention with patent protection on the one hand, and the interest in avoiding monopolies that unnecessarily stifle competition on the other, has been a feature of the federal patent laws since their inception.”). While the patent laws are socially beneficial, they are also vulnerable to abuse. *See, e.g., eBay*, 126 S. Ct. at 1842 (Kennedy, J., joined by Stevens, Souter, and Breyer, JJ., concurring) (noting that “an injunction ... can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent”).¹¹ Granting a monopoly on non-

computer, software morphs into hardware and vice versa at the touch of a button.”) (citations omitted).

¹¹ Limits on patentable subject matter provide an important requirement for patentability, beyond the other requirements of the patent laws such as §§ 102, 103, and 112. While robust application of
(Continued...)

technological methods, untethered to a particular practical application, would upset this “careful balance,” *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989), and thereby “stifle, rather than promote, the progress of useful arts,” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1746 (2007) (citing U.S. Const., art. I, § 8, cl. 8); *see also Metabolite*, 126 S. Ct. at 2922 (Breyer, J., joined by Stevens and Souter, JJ., dissenting from dismissal of writ of certiorari as improvidently granted) (“[S]ometimes *too much* patent protection can impede rather than ‘promote the Progress of Science and useful Arts.’”) (emphasis in original); *id.* (“Patent law seeks to avoid the dangers of overprotection just as surely as it seeks to avoid the diminished incentive to invent that underprotection can threaten. One way in which patent law seeks to sail between these opposing and risky shoals is through rules that

these other patentability requirements is important to prevent inventions without merit from receiving patent protection, it is equally important to apply the limitations of § 101 set forth by this Court and the Supreme Court as synthesized in the technological contribution standard described herein. This test excludes nontechnological business methods from patent protection even if they satisfy the other patentability requirements, which is necessary to balance the competing policy objectives of the patent system of fostering innovation without improperly impacting competition.

bring certain types of invention and discovery within the scope of patentability while excluding others.”).

There is a conspicuous absence of evidence of any sudden need for patent-based incentives to promote the development of non-technological business methods. “Nowhere in the substantial literature on innovation is there a statement that the United States economy suffers from a lack of innovation in methods of doing business. Compared with the business practices of comparable economies we seem to be innovators” Leo J. Raskind, *The State Street Bank Decision: The Bad Business of Unlimited Patent Protection for Methods of Doing Business*, 10 Fordham Intell. Prop., Media & Ent. L.J. 61, 92 (1999). President Coolidge’s famous adage, that “the chief business of the American people is business,” was coined seven decades before this Court’s opinion in *State Street* set off a debate over the necessity for protecting business methods as patentable inventions. Claude M. Fuess, *Calvin Coolidge, The Man From Vermont* 358 (1940). Among the reasons for the persistent favorable record of commercial entrepreneurship in the United States are existing federal and state legal regimes, including unfair competition law, trade secrets,

copyright, and the misappropriation doctrine, that have long policed free-riding and have allowed business pioneers to reap the rewards of their ideas. *See* Raskind, *State Street*, 10 Fordham Intell. Prop., Media & Ent. L.J. at 93. In conjunction with market-based incentives, including the desire to seize first-mover and learning-curve advantages, the current legal framework has resulted in a flourishing environment for business innovation in the United States. *See id.* at 92-93 (“There is ... substantial anecdotal evidence that competition alone serves as a sufficient spur to innovation in business methods.”); *see also* Malla Pollack, *The Multiple Unconstitutionality Of Business Method Patents*, 28 Rutgers Computer & Tech. L.J. 61, 75-76 (2002) (“Since business methods are ‘useful’ when they directly earn revenue, they are inherently unlikely to be under-produced due to market failure—in contrast to more conventional patentable subject matter.”). No plausible argument supports the view that patent protection of non-technological business methods is needed to solve a market failure problem, fill a legal void, or ultimately enhance social welfare.

To the contrary, issuing patents on non-technological business methods raises significant competitive concerns, and actually

diminishes social welfare. See, e.g., Pollack, *Multiple Unconstitutionality*, 28 Rutgers Computer & Tech. L.J. at 76 (“If we grant rights to exclude unnecessarily, we raise prices and limit competition with no quid pro quo.”). Allowing such patents drives an “ends justifies the means” approach whereby patents are written to cover results, not the way those results are achieved. Since such patents are not restricted to any specific application or technology, they effectively appropriate all possible solutions to a problem, and discourage, rather than encourage, innovation aimed at actual technological implementations. Such patents provide a monopoly covering all technical solutions to a given business problem rather than the solution that was invented. In effect, this practice amounts to patenting the problem rather than the solution, which contradicts the principle that “[i]t is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted, and not for the result or effect itself.” *Diehr*, 450 U.S. at 182 & n.7 (quoting *Corning*, 56 U.S. (15 How.), at 267-68).

Moreover, these broadly claimed abstract methods restrain the ability of competitors to develop alternatives to the patented invention,

thus thwarting a principal aspiration of the patent system, which is to foster new alternatives. *See, e.g., Brenner v. Manson*, 383 U.S. 519, 534 (1966) (“Until [a] process claim has been reduced to production of a product shown to be useful, the metes and bounds of that monopoly are not capable of precise delineation. It may engross a vast, unknown, and perhaps unknowable area.”); *Slimfold Mfg. Co. v. Kinkead Indus., Inc.*, 932 F.2d 1453, 1457 (Fed. Cir. 1991) (“Designing around patents is, in fact, one of the ways in which the patent system works to the advantage of the public in promoting progress in the useful arts, its constitutional purpose.”). Thus, the imbalance in incentives inherent in the patenting of non-technological business methods discourages rather than promotes technological innovation.

Consider, for example, the ubiquitous automated teller machine (“ATM”). A review of the patent rolls reveals numerous ATM patents concerning such mechanical, electrical, and computer-implemented inventions as card readers, touch screens, cash dispensers, statement printers, and antitheft mechanisms. As evidenced by the robust competition within the ATM industry, such patents have both preserved the incentives of industry participants to innovate and allowed their

competitors to market alternative designs. However, to the extent that this Court's precedents have been read to endorse the patentability of abstract business methods, an inventor's claim to a process of performing teller-free transactions could be considered eligible for patenting under § 101. If such patent had been filed before the first ATM had been developed, it might have been upheld under a standard that allows patentability of nontechnological business methods. Much like claim 8 of Samuel Morse's telegraphy patent, *see Morse*, 56 U.S. at 113, such an abstract patent, untethered to a particular practical application, would discourage all others from designing alternative mechanisms for meeting the same marketplace needs. The potential adverse impact of this hypothetical abstract patent upon competition not just in the ATM industry, but within the banking industry itself, is apparent.

The lack of a plausible justification for patents on abstract business methods, coupled with the anticompetitive consequences of issuing these patents, counsels that this Court clarify that patentable subject matter is limited to inventions involving technological contributions. Modern society's dizzying pace of technological change,

with its accompanying changes to marketplace conditions and commercial practices, should by no means lead to an alteration of these established principles.

Nor does the principle that the patent system should keep pace with unforeseeable fields of scientific or technological discovery, *see, e.g., Diamond v. Chakrabarty*, 447 U.S. 303, 315-16 (1980), compel a contrary result. Neither abstract nor non-technological business methods are an unforeseeable field. *See, e.g., John R. Thomas, The Patenting of the Liberal Professions*, 40 B.C. L. Rev. 1139, 1145-46 (1999). To the contrary, people have been creating new business methods since long before any patent system existed. Moreover, by definition, abstract or inchoate business methods are not scientific or technological. *See, e.g., Pollack, Multiple Unconstitutionality*, 28 Rutgers Computer & Tech. L.J. at 77-78. “Jefferson saw clearly the difficulty in drawing a line between the things which are worth to the public the embarrassment of an exclusive patent, and those which are not.” *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 9 (1966) (internal quotation omitted). This Court should now clarify the *State Street* and *AT&T* decisions to limit the ambit of patentable subject

matter to that range of technological innovations which truly justifies tolerating the “embarrassment of an exclusive patent.” *Id.* (internal quotation omitted).

CONCLUSION

For the foregoing reasons, the Court should clarify that the scope of patentable subject matter of processes under § 101 is limited to processes that involve technological contributions—namely, processes that either (1) are tied to a particular machine or apparatus, or (2) cause transformation or reduction of an article to a different state or thing, and in either instance produce technologically beneficial results.

April 7, 2008

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CERTIFICATE OF COMPLIANCE

The undersigned certifies that the brief is proportionately spaced, has a typeface of 14 points or more, and contains 6,800 words.

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