

VOLUME ONE | ISSUE FOUR
DECEMBER 2008

IN THIS ISSUE:

- 35 U.S.C. § 101
- Patentable Subject Matter Spectrum
- Patentable "Processes" Before *Bilski*
- *In Re Nuijten* — Patentability Of A "Manufacture"

Willkie Farr & Gallagher's *Federal Circuit Review* is a newsletter from the Intellectual Property Department on recent developments taking place in the Court of Appeals for the Federal Circuit. The *Federal Circuit Review* will present an annual synopsis of the most recent decisions and what they mean for today's intellectual property-focused businesses. This issue will present recent developments and highlights concerning the law on patentable subject matter.

35 U.S.C. § 101

This issue will explore the boundaries of patentable subject matter. According to § 101 of the patent statute "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor" provided that all the other requirements of patentability are satisfied. 35 U.S.C. § 101.

The question of what constitutes patentable subject matter is not often before the Federal Circuit. Over the past year, however, the Federal Circuit has specifically focused on the patent-eligibility of claimed "processes." Recently, the court also addressed whether claimed subject matter falling outside any of the statutory categories of "process, machine, manufacture, or composition of matter" might nonetheless be patentable.

On October 30, 2008, the Federal Circuit sitting en banc issued a decision in *In re Bilski* which sets forth a new more stringent test for determining whether a claimed method constitutes a patent-eligible "process." Prior to *Bilski*, notable Federal Circuit decisions addressed the patentability of "process" claims, including *AT&T Corp.* and *In re Comiskey*.

Also, on September 20, 2007 in *In re Nuijten*, the Federal Circuit found claims to a signal itself to be unpatentable. Under the reasoning of the decision, to be patentable under 35 U.S.C. § 101, a "manufacture" must be a tangible article that is nontransitory and capable of being perceived without special equipment.

PATENTABLE SUBJECT MATTER SPECTRUM

35 U.S.C. § 101 provides four specific statutory categories of patent-eligible subject matter: process, machine, manufacture, or composition of matter. The Supreme Court has interpreted those categories broadly,

FEDERAL CIRCUIT REVIEW

stating that the range of potentially patentable subject matter includes “anything under the sun made by man,” other than the area occupied by fundamental principles such as laws of nature, natural phenomena, or abstract ideas. See *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). However, the trend in the Federal Circuit has been to limit the breadth of these categories.

Under the statute, “process” means a “process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.” 35 U.S.C. § 100(b). “Machine” includes “every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result.” *In re Bilski*, 2008 U.S. App. LEXIS 22479, *86 (Dyk, J., concurring) (internal citation omitted). “Manufacture” means (1) “the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand labor or by machinery”; and (2) “anything made for use from raw or prepared materials.” *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11 (1931). Lastly, “composition of matter” means “all compositions of two or more substances and . . . all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids.” *Chakrabarty*, 447 U.S. at 308.

The Federal Circuit issued two important decisions interpreting 35 U.S.C. § 101: *In re Bilski*, addressing what is a patentable “process,” and *In re Nuijten*, addressing what is a patentable “manufacture.”

PATENTABLE “PROCESSES” BEFORE BILSKI

STATE STREET

In 1998, the Federal Circuit in *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) found that business methods are “subject to the same legal requirements for patentability as applied to any other process or method” and thus can constitute patentable subject matter. This decision is widely credited as paving the way for a flood of business method patents.

In *State Street*, the court addressed the patentability of a data processing system with an investment structure for mutual funds to pool their assets within a portfolio. The system calculated the percentage share that each fund maintained in the common portfolio while taking into account daily changes in the value of the portfolio’s investment securities and the amount of each fund’s assets, and also determined aggregate year-end income, expenses, and capital gain or loss.

The Federal Circuit reversed the district court’s denial of patent protection and upheld the patentability of Signature’s machine-implemented financial method. The court focused on the practical application of the claimed mathematical algorithm. “[T]he transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation.” *Id.* at 1373. The court further stated that the “useful, concrete and tangible result” produced by the method “renders it statutory subject matter, even if the useful result is expressed in numbers, such as price, profit, percentage, cost, or loss.” *Id.* at 1375.

The Federal Circuit rejected the “judicially-created, so-called ‘business method’ exception to statutory subject matter.” *Id.* at 1375. The Federal Circuit declared that “[w]e take this opportunity to lay this ill-conceived exception to rest.” *Id.*

AT&T CORP.

In 1999, in *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999), the Federal Circuit applied the “useful, concrete and tangible result” test to a non-machine-implemented process.

The AT&T claims were directed to a method for storing a primary interexchange carrier (“PIC”) indicator. The PIC was used to identify a telephone call recipient’s long-distance carrier and allow carriers to provide differential billing treatment for their subscribers.

On appeal, the Federal Circuit reversed the district court’s finding that the claims were invalid under § 101 because they were directed to a mathematical algorithm. The court concluded that a mathematical algorithm may be an integral part of patentable subject matter such as a machine or process if the claimed invention as a whole is applied in a “useful” manner. *Id.* at 1357. The court explained that “physical transformation” is not “an invariable requirement, but merely one example of how a mathematical algorithm may bring about a useful application.” *Id.* at 1358. In short, “computer-based programming constitutes patentable subject matter so long as the basic requirements of § 101 are met.” *Id.* at 1360.

The Federal Circuit relied in part on its decision in *State Street* to support its decision in *AT&T Corp.* However, the claims in *State Street* involved a machine. By contrast, AT&T’s claims lacked any physical structure.

METABOLITE LABS

Notably, in 2006, three Supreme Court justices challenged the “useful, concrete and tangible result” test set forth in *State Street*. In the context of dissenting from a denial of a petition for certiorari in *Laboratory Corp. v. Metabolite Labs., Inc.*, 548 U.S. 124 (2006) as improvidently granted, Justice Breyer (joined by Justices Stevens and Souter), pointed out that the Supreme Court has never said that something is patentable because it produces a useful, concrete and tangible result and that “taken literally, the statement would cover instances where this Court has held the contrary.” *Id.* at 136-137.

IN RE COMISKEY

In 2007, in *In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007) the Federal Circuit denied patentability to claims for an arbitration process for legal documents. The court held that “mental processes—or processes of human thinking—standing alone are not patentable even if they have practical application.” *Id.* at 1377.

Comiskey’s application claimed a method and system for “mandatory arbitration resolution” of disputes involving legal documents such as wills or contracts. While independent claims 1 and 32 did not recite the use of a computer or other machine, independent claim 17 recited computer system elements, including (1) a registration module, (2) an arbitration database, (3) an arbitration resolution module, and (4) a means for selecting an arbitrator from an arbitrator database. Other claims also required use of a computer or other device.

The Board of Patent Appeals and Interferences affirmed the examiner’s rejection of all of the claims as obvious in view of various combinations of prior art.

On appeal, the Federal Circuit *sua sponte* raised the issue of subject matter eligibility under 35 U.S.C. § 101. The court found claims 1 and 32 unpatentable because they did not require a machine, explaining that:

[T]he present statute does not allow patents to be issued on particular business systems — such as a particular type of arbitration — that depend entirely on the use of mental processes ... [T]he application of human intelligence to the solution of practical problems is not in and of itself patentable.

Id. at 1378-1379.

The court separately addressed independent claims reciting the use of a computer or other device which might be construed as combining the use of a machine with a mental process. While these claims were found patent-eligible under § 101, the court remanded for a determination on the issue of obviousness, stating “[t]he routine addition of modern electronics to an otherwise unpatentable invention typically creates a prima facie case of obviousness.” *Id.* at 1380.

Cases referenced

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

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

Laboratory Corp. of Am. Holdings v. Metabolite Labs., Inc., 548 U.S. 124 (2006)

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

IN RE BILSKI

In *In re Bilski*, 2008 U.S. App. LEXIS 22479 (Fed. Cir. 2008), the Federal Circuit sitting en banc clarified the proper test for determining whether a method constitutes a patent-eligible “process.” Chief Judge Michel authored the majority opinion, adopting a new, more stringent “machine-or-transformation” test for the patentability of processes.

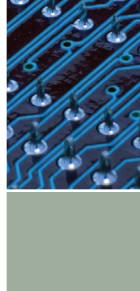
The dispute in *Bilski* stemmed from Bilski’s patent application for a method of hedging risk in the field of commodities trading. The patent application at issue in *Bilski* was filed in April, 1997. The main claim of Bilski’s patent application recites:

A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:

- (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
- (b) identifying market participants for said commodity having a counter-risk position to said consumers; and
- (c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

The Patent Office rejected Bilski’s patent claims because they (1) did not involve the transformation of a physical subject matter, (2) did not describe an apparatus to perform the claimed functions, (3) were directed to an “abstract idea,” and (4) failed to recite a “‘practical application’ or produce a ‘concrete and tangible result’” under the *State Street* test.

Id. at *11-13.



Bilski appealed the Board's decision to the Federal Circuit, which *sua sponte* ordered supplemental briefing and rehearing en banc. The Federal Circuit invited argument on the following questions:

- o Whether claim 1 of the 08/833,892 patent application claims patent-eligible subject matter under 35 U.S.C. § 101?
- o What standard should govern in determining whether a process is patent-eligible subject matter under § 101?
- o Whether the claimed subject matter is not patent-eligible because it constitutes an abstract idea or mental process; when does a claim that contains both mental and physical steps create patent-eligible subject matter?
- o 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 § 101?
- o Whether it is appropriate to reconsider *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* and *AT&T Corp. v. Excel Communications, Inc.* in this case and, if so, whether those cases should be overruled in any respect?

At the en banc hearing on May 8, 2008, the Federal Circuit panel focused on *Diamond v. Diehr*, 450 U.S. 175 (1981) and explored the definition of "transformation." For example, the judges asked whether the process of throwing a curve ball involved a physical transformation — to which the Patent Office responded that it did not. It was also argued by amicus for the financial services industry that a process tied to a physical apparatus in a "non-conventional" manner might be patentable.

MAJORITY OPINION

The Federal Circuit issued its 132-page opinion on October 30, 2008. In the majority opinion, the court held that Bilski's hedging method was not eligible for patent protection under 35 U.S.C. § 101 because it was not "tied to a specific machine" and did not "transform a particular article to a different state or thing." This test is referred to as the "machine-or-transformation" test.

The first question the court addressed in *Bilski* was how to determine what kind of "process" is eligible for patent protection under § 101. The court revisited the Supreme Court's 1981 *Diehr* decision which held that a claim is not patentable if it claims "laws of nature, natural phenomena, [or] abstract ideas." *Diehr*, 450 U.S. at 185. Explaining that these "fundamental principles" are "part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none," the court declared that the "true issue before us then is whether Applicants are seeking to claim a fundamental principle (such as an abstract idea) or a mental process." *In re Bilski*, 2008 U.S. App. LEXIS 22479, at *18.

Next, the court questioned whether Bilski's claim "recites a fundamental principle and, if so, whether it would [impermissibly] pre-empt substantially all uses of that fundamental principle if allowed." *Id.* at *23. The court looked to Supreme Court precedent to outline a test to use to determine whether a process claim pre-empts a fundamental principle or covers only a particular application of the principle. Thus, the court devised the "machine-or-transformation test" and held that this test is the "proper" and "governing" test to determine whether a process is patentable.

"MACHINE-OR-TRANSFORMATION" TEST

The "machine-or-transformation test" requires that a process either be "tied to a particular machine" or "transform[] a particular article into a different state or thing." Processes that do not meet this test will no longer be patentable under § 101. See *id.* at *30.

FEDERAL CIRCUIT REVIEW

The court explained that merely reciting some machine or some transformation in the patent claims is insufficient. Instead, “the use of a specific machine or transformation of an article must impose meaningful limits on the claim’s scope.” *Id.* at *46-47. The court also noted that mere “field of use” claim limitations or a recitation of “insignificant extra-solution activity,” such as data gathering, is insufficient to render an ineligible process patentable. *Id.* at *32-35, 47.

Here, because *Bilski*’s claims did not involve the use of any specific machine, the court focused on the “transformation” prong of the test. Accordingly, the court left to another day “whether or when recitation of a computer suffices to tie a process claim to a particular machine.” *Id.* at *47.

On the transformation part of the test, the court explained that the transformation of an article into a different state or thing “must be central to the purpose of the claimed process.” *Id.* at *47. The “article” that is being transformed is also key to patentability. The court acknowledged that “articles” such as “electronic signals and electronically-manipulated data” are “raw materials of many information-age processes” and may be patent-eligible. *Id.* at *48. For example, processes involving an “electronic signal representative of any physical object or substance” or the “electronic transformation of the data itself into a visual depiction” may be patent-eligible. *Id.* at *50, 53. By contrast, the court characterized legal obligations, legal relationships, and business risks as examples of “abstractions” that “cannot meet the test because they are not physical objects or substances.” *Id.* at *52.

The court specifically rejected two of its own prior tests, including *State Street*’s “useful, concrete and tangible result” test, and the *Freeman-Walter-Abele* test, named for three decisions of its predecessor court, which required a determination of whether the claims recite an “algorithm” and whether that algorithm is applied in any manner to physical elements or process steps. *Id.* at *38, *40-41, n.19. The court also refused to adopt a “technological arts” test. *Id.* at *41.

The *Bilski* court left the door open for “future developments in technology and the sciences,” recognizing “that the Supreme Court may ultimately decide to alter or perhaps even set aside this test to accommodate emerging technologies.” *Id.* at *31. The court noted that “we certainly do not rule out the possibility that this court may in the future refine or augment the test or how it is applied.” *Id.*

The majority opinion by Chief Judge Michel was joined by nine of the twelve members of the court. Judge Dyk filed a concurring opinion (joined by Judge Linn). Judges Mayer, Newman, and Rader filed separate dissenting opinions.

CONCURRING & DISSENTING OPINIONS

Judge Dyk’s concurring opinion rejects the notion that “processes for organizing human activity were or ever had been patentable.” *Id.* at *77. Judge Dyk reviews the history and origins of the United States patent system and reports that English practice and Supreme Court precedent are consistent with the concept that patentable processes are only those “processes for using or creating manufactures, machines, and compositions of matter,” i.e., processes “involving other types of patentable subject matter.” *Id.* at *77, *85.

Judge Mayer dissented; indicating that he would have adopted the “technological arts” test, he declared that “[t]he patent system is intended to protect and promote advances in science and technology, not ideas about how to structure commercial transactions.” *Id.* at *154, 188-190. He explained that “a technological arts test” is fundamentally different than the machine-or-transformation

test. Distinguishing the two tests, he stressed that not all patent claims involving “a physical transformation that is central to the claimed method” should be patent-eligible. *Id.* at *187-188.

Judge Newman dissented, stating that by “exclud[ing] all processes that do not transform physical matter or that are not performed by machines,” the majority’s machine-or-transformation test “excludes many of the kinds of inventions that apply today’s electronic and photonic technologies, as well as other processes that handle data and information in novel ways.” *Id.* at *90. Judge Newman warned that the decision’s “impact on the future, as well as on the thousands of patents already granted, is unknown.” *Id.* at *91.

Judge Rader declared that there was no need to establish a new standard and that he would have decided the opinion with one line: “Because *Bilski* claims merely an abstract idea, this court affirms the Board’s rejection.” Judge Rader also lamented that the machine-or-transformation test risks “precluding patent protection for tomorrow’s technologies.” *Id.* at *207.

Cases referenced

In re Bilski, 2008 U.S. App. LEXIS 22479 (Fed. Cir. 2008)

In re Bilski, No. 2007-1130, 264 Fed. Appx. 896 (Fed. Cir. 2008)

Ex Parte Bilski, 2006 WL 4080055 (Bd. Pat. App. & Int., Sept. 26, 2006)

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

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

IN RE NUIJTEN — PATENTABILITY OF A “MANUFACTURE”

The Federal Circuit also recently addressed whether a signal can be patented. A signal is a physical quantity that can carry information, such as a pattern of light or sound.

In *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007), the Federal Circuit upheld the Board’s determination that a signal per se is not patentable subject matter under § 101. Mr. Nuijten invented a signal that was embedded with a digital “watermark” to protect information from unauthorized copying with minimal distortion. Notably, the Patent Office allowed claims to Mr. Nuijten’s signal when stored on a storage medium, as well as claims to generating, receiving, and processing Mr. Nuijten’s signal. The appeal addressed claims to the encoded signals themselves, separate from any specific physical medium, that were rejected by the Patent Office.

The Federal Circuit determined that the claims were directed to “physical but transitory forms of signal transmission.” *Id.* at 1353. The decision, by 2 to 1 panel majority (Judges Gajarsa and Moore), explained that the claimed signals are not a process, machine, manufacture, or compositions of matter. Specifically, the majority reasoned that, although the claimed signal is “physical” and has “tangible causes and effects,” it is not a “manufacture” because it is fleeting and can only be perceived through special equipment. Thus, the majority found that signals are not “tangible articles or commodities,” and do not qualify as a patentable “manufacture.” *Id.* at 1356-1357.

The majority also stated that the claimed signals are not a “process” because a process requires action — “an act or series of acts.” *Id.* at 1355. Likewise, the claimed signals are not a “machine” because they are not a “concrete thing” made of “parts” or “devices.” *Id.* at 1355. Finally, the majority found that a signal is not a “composition of matter” because a “signal comprising a fluctuation in electric potential or in electromagnetic fields is not a ‘chemical union,’ nor a gas, fluid,

powder, or solid.” *Id.* at 1357.

In dissent, Judge Linn found that the claimed signal is a “manufacture.” Judge Linn’s lucid opinion stated that, because it is physical, he would consider a signal to be a patentable “manufacture,” and that the majority’s position is contrary to prior Supreme Court decisions.

On February 11, 2008, the Federal Circuit denied Nuijten’s petition for rehearing en banc. Judge Linn again dissented, this time joined by Judges Newman and Rader. Nuijten petitioned for certiorari in the U.S. Supreme Court, joined by two amicus parties. The Supreme Court denied Nuijten’s petition for writ of certiorari on October 6, 2008.

Cases referenced

In re Nuijten, 500 F.3d 1346 (Fed. Cir. 2007)

CONTACT INFORMATION

If you have any questions, please contact the authors of this newsletter listed below or the Willkie attorney with whom you regularly work.

Eugene L. Chang
(212) 728-8988
echang@willkie.com

Michael W. Johnson
(212) 728-8137
mjohnson1 @willkie.com

Chandra E. Garry
(212) 728-8623
cgarry@willkie.com

ABOUT WILLKIE FARR & GALLAGHER LLP

Established in 1888, Willkie comprises more than 700 lawyers in offices in New York, Washington, Paris, London, Milan, Rome, Frankfurt, and Brussels. Our diverse areas of expertise and pragmatic approach to the practice of law make our firm uniquely qualified to comprehensively serve the needs of our clients around the world.

WILLKIE FARR & GALLAGHER LLP
787 Seventh Avenue
New York, NY 10019-6099
Tel (212) 728-8000
Fax (212) 728-8111

Copyright © 2008 by Willkie Farr & Gallagher LLP.

All Rights Reserved. This newsletter may not be reproduced or disseminated in any form without the express permission of Willkie Farr & Gallagher LLP. This newsletter is provided for news and information purposes only and does not constitute legal advice or an invitation to an attorney-client relationship. While every effort has been made to ensure the accuracy of the information contained herein, Willkie Farr & Gallagher LLP does not guarantee such accuracy and cannot be held liable for any errors in or any reliance upon this information. Under New York’s Code of Professional Responsibility, this material may constitute attorney advertising. Prior results do not guarantee a similar outcome.

WILLKIE FARR & GALLAGHER^{LLP}

www.willkie.com | NEW YORK WASHINGTON PARIS LONDON MILAN ROME FRANKFURT BRUSSELS