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Joseph M. Barich

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IN RE BILSKI - RECENT DEVELOPMENTS IN METHOD CLAIMING

Joseph M. Barich*

I. INTRODUCTION

All patents involve an economic tradeoff on the part of the government. While it is generally agreed that the underlying purpose of the patent system is to promote the progress of science and the useful arts for the benefit of the citizens of the United States,¹ and that the grant of an exclusive patent right to one party may incentivize innovation and help the inventor to obtain the capital necessary to bring a product to market, granting an exclusive right to one party may make it more difficult for a subsequent inventor to bring a new product to market. Thus, the patent system seeks to strike a delicate balance between incentivizing the creation and funding of new products while not unduly hampering or delaying the development of future products so as to provide the maximum benefit to the citizens of the United States.

In this regard, so called "Business Method Patents" have recently been the subject of much scrutiny. Many commentators believe that the scope of patent protection afforded to some business method patents necessarily forestalls the ability of a subsequent inventor to bring a new product to market, and that the grant of business method patents impermissibly weighs the balance too far in favor of the first inventor to the detriment of subsequent inventors and the citizenry as a whole.² However, other commentators remind us that the very purpose of the patent system is to promote the progress of the useful arts, and that many such business method patents represent very useful products and services, some of which, like eBay, may be used by millions of citizens everyday.³ Further, de-incentivizing development in this area may be

* Shareholder, McAndrews, Held & Malloy, Ltd. and Adjunct Professor of Law at the University of Illinois College of Law.

1. U.S. CONST. art I, § 8, cl. 2.

2. See, e.g. Robert P. Merges, *As Many As Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*. 14 Berkeley Tech. L.J. 577 (1999) (discussing the high error rate of business patents issued by the United States Patent and Trademark Office); Australian Consumers' Association, Submission to Advisory Council on Intellectual Property, *Patenting of Business Systems Issue Paper* (2002) http://www.acip.gov.au/bus_submissions/aca.pdf (arguing that such patents hurt consumers who are forced to pay higher prices for goods and services).

3. See Benjamin N. Roin, *Unpatentable Drugs and the Standards of Patentability*. 87 Tex. L. Rev.

especially undesirable as the U.S. continues its transition from a manufacturing economy to a knowledge-based economy.

One solution would be to approach the legislature, but in the absence of a clear statute, it is up to the courts to attempt to determine where to strike a balance. This article will discuss the most recent attempt by the Federal Circuit to strike this balance in *In re Bilski*,⁴ briefly review the response of the U.S. Patent and Trademark Office (“USPTO”), and review some of the recent post-*Bilski* decisions from the USPTO’s Board of Patent Appeals and Interferences (“BPAI”) and the Federal Circuit.

II. BACKGROUND

The concept of statutory subject matter is set forth in 35 U.S.C. § 101:

Whoever 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, subject to the conditions and requirements of this title.

Thus, the statute states four broad classes of statutory subject matter: process, machine, manufacture, and composition of matter. Also it should be noted that these four classes relate to particular claiming styles, not necessarily the subject matter of the innovation. That is, a single innovation may be claimed using claims that fall into two or more of the statutory categories. For example, an innovation representing a new way to manufacture candy may be claimed as a machine (directed to the candy making machine itself), a process (directed to the series of steps involved in making the candy), a manufacture (the candy bar made by the process), and even possibly a new composition of matter if the candy bar contains unique ingredients.

Although the statute sets forth the four statutory classes, it does not directly address the question of how to determine whether a particular claim falls within one of the classes. More specifically, if a claim is drafted in a process format (also called a “method” format) what does the claim have to recite in order for the claim to fall within the statute?

For approximately the last decade, the dominant test for determining whether a process or method claim recited statutory subject matter was the “useful, concrete, and tangible result” test set forth in both *State Street Bank & Trust Co. v. Signature Fin. Group*⁵ and *AT&T Corp. v. Excel Communications, Inc.*⁶ Under this test, the process claim would have to recite a useful, concrete, and tangible result in order to be considered statutory subject matter.⁷ Claims reciting abstract ideas that did not provide a tangible result, or that did not

503, 507–08 (2009) (“scholars have defined the very purpose of the patent system as “the promotion of new and improved works.”” (quoting Menell & Scotchmer, Intellectual Property, in 2 Handbook of Law and Economics 1476, 1475 (A. Mitchell Polinsky & Steven Shavell eds., 2007))).

4. 545 F.3d 943, (Fed. Cir. 2008) (*en banc*).

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

6. *AT&T Corp. v. Excel Commc’ns, Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1998).

7. *Id.* at 1358.

provide a concrete result, did not recite statutory subject matter.⁸ In *State Street*, claims reciting the determination of a securities risk portfolio and the allocation of securities in light of the portfolio were found to be statutory subject matter; inclusion of a new billing field in a billing record for telephone calls was found to be statutory subject matter in *AT&T*.⁹

In addition to the *State Street/AT&T* test, several other tests had previously been used by the Supreme Court or the Federal Circuit, such as the *Freeman-Walter-Abele* test used by the predecessor to the Federal Circuit,¹⁰ as well as Supreme Court precedent in *Parker v. Flook*,¹¹ *Diamond v. Diehr*,¹² and *Gottschalk v. Benson*.¹³ However, all of these tests were promulgated in the 1970s and early 1980s, and the innovations of that era were distinctly different from the innovations of today. In addition to the tests provided by the Courts, the USPTO would occasionally interpret the case law as giving rise to additional tests, such as the “technological arts” test based on *In re Musgrave*.¹⁴

Although all of the aforementioned tests differed somewhat in the balance that they struck between claims reciting statutory subject matter and those that were non-statutory, the *State Street/AT&T* test was the dominant test for the past decade. The other tests primarily were viewed as helpful only in certain circumstances or as being somewhat dated because of the progression of technology over the last thirty years.¹⁵ Also, several of the previous tests were unclear as to whether their determinations of statutory subject matter applied only to the “process” statutory class or to additional statutory classes as well.¹⁶

III. THE *BILSKI* DECISION

The recent decision in *In re Bilski*¹⁷ is the most significant decision in a decade by the Federal Circuit with regard to the definition of statutory subject matter under 35 U.S.C. § 101. This article examines how *Bilski* is actually being applied by the Federal Circuit, BPAI, and USPTO to gain practical insight to help patent applicants craft their claims in a way that is more likely to be accepted by the USPTO and more likely to be upheld by the courts.¹⁸

8. See *State Street*, 149 F.3d at 1373 (applying abstract ideas test to mathematical algorithms).

9. *AT&T*, 172 F.3d at 1358; *State Street*, 149 F.3d at 1373.

10. *In re Freeman*, 573 F.2d 1237, 1245–46 (CCPA 1978); *In re Walter*, 618 F.2d 758, 766–67 (CCPA 1980); *In re Abele*, 684 F.2d 902, 905 (CCPA 1982).

11. 437 U.S. 584 (1978).

12. 450 U.S. 175 (1981).

13. 409 U.S. 63 (1972).

14. 431 F.2d 882 (C.C.P.A. 1970).

15. See *In re Bilski*, 545 F.3d 943, 990–994 (Fed. Cir. 2008) (Newman, J., dissenting) (noting that the decision in *State Street Bank* created “stable law” upon which industries have relied in filing more than 40,000 patent applications since 1998, when the decision was handed down).

16. See *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1386 (Fed. Cir. 1998) (applying analysis for “process” class even though the claims at issue were system claims, not a process claims).

17. 545 F.3d 943 (Fed. Cir. 2008) (*en banc*).

18. We leave it to other authors to conduct a more formal analysis of *Bilski* as compared to prior decisions of the Supreme Court and Federal Circuit.

A. *The Bilski Claims*

Bernard L. Bilski and Rand A. Warsaw filed a provisional patent application¹⁹ on April 16, 1996 entitled “Energy Risk Management Method,” which was accorded Patent Application No. 60/015,756 by the USPTO.²⁰ On April 10, 1997, within the one-year period for claiming priority to the provisional patent application, Bilski and Warsaw filed with the USPTO a regular utility patent application (“the *Bilski* application”) claiming priority to the provisional application.²¹ The utility patent application was accorded Patent Application No. 08/833,892 by the USPTO.²²

At issue in the *Bilski* application were claims 1–11, which were drawn to a method for hedging risk with regard to commodities trading. Claim one stated:

1. 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 transactions²³

As will be discussed further below,²⁴ claim 1 refers to initiating a series of transactions, but does not indicate any specific machine or apparatus for implementing the transactions. For example, claim one does not recite that the initiating step is performed on a computer.

At the USPTO, claim 1 was rejected by the Examiner as attempting to claim an abstract idea and for failing to meet the “technological arts” test then advanced by the USPTO.²⁵

19. A provisional patent application is filed under 35 U.S.C. § 111(b) (2000). The provisional patent application exists for up to one year and, if a regular utility patent application is filed within that one year, the regular utility patent application will be treated as if it were filed the day that the provisional patent application was filed, at least to the extent that the subject matter appeared in the provisional patent application. *Id.*

20. *Ex parte* Bilski, No. 2002–2257, 1 (B.P.A.I. Mar. 8, 2006).

21. *Id.* at n.1.

22. *Id.*

23. Claims 1–11 of the *Bilski* application included independent claim 4 in addition to independent claim 1. *Id.* at 2. However, the BPAI found that claim 4 was similar to claim 1, but merely defined “fixed price” in terms of a mathematical expression. *Id.* Thus, the same reasoning that was applied to independent claim 1 was also applied to independent claim 4. *Id.* The remaining claims 2–3 and 5–11 were dependent claims that stand or fall with their respective independent claim. *Id.*

24. See *infra* section III.G (discussing interpretations of claim one when the language of the claim was not tied to a specific machine or apparatus).

25. *Id.* at 3–4.

On appeal, the BPAI held that the application of the technological arts test to the claims was in error because the case law did not support such a test.²⁶ However, the BPAI held that, although a specific machine implementation is not required in all cases, where there is an absence of a specific apparatus there must be a transformation of physical subject matter from one state to another.²⁷ Conversely, Bilski's claims were not patentable because (1) they only involved the transformation of non-physical financial risks and legal liabilities, and (2) the claim preempted any and every way of performing the process and thus constituted an abstract idea ineligible for patentability.²⁸

Bilski then appealed the decision of the BPAI to the United States Court of Appeals for the Federal Circuit.²⁹ The *Bilski* case was initially argued to a panel of the Federal Circuit in the fall of 2007.³⁰ However, before the panel could render a decision, the Federal Circuit *sua sponte* decided to rehear the case *en banc*.³¹

Recognizing the importance of the case, many parties filed amicus briefs, with some arguing for an expansion of statutory subject matter and others arguing that the current inclusions in statutory subject matter were already too broad.³² The *en banc* rehearing took place on May 8, 2008³³ with the patent bar eagerly awaiting the outcome.

B. *The Federal Circuit's Analysis*

After more than five months of speculation, the Federal Circuit announced its decision in *In re Bilski* on October 30, 2008.³⁴ In *Bilski*, the Federal Circuit began its analysis by reviewing the language of 35 U.S.C §

More specifically, the Examiner found that:

"the invention is not implemented on a specific apparatus and merely manipulates [an] abstract idea and solves a purely mathematical problem without any limitation to a practical application, therefore, the invention is not directed to the technological arts." *Id.* at 3.

26. *Id.* at 41.

27. *Id.* at 54.

28. Although the Examiner applied the Interim Guidelines promulgated by the USPTO, such Guidelines are not binding on the BPAI, as the BPAI so vividly illustrated:

"Guidelines are intended to instruct examiners on how to apply the law to the facts. The Board is not bound by such guidelines FN8, but applies the law directly to the facts." *Id.* at 69–70. In the footnote, the court drove home their point by quoting the movie *Pirates of the Caribbean* (Disney 2003):

Elizabeth: You have to take me to shore! According to the Code of the Order of the Brethren.

Barbossa: First, your return to shore was not part of our negotiations nor our agreement, so I 'must' do nothin'. And secondly, you must be a pirate for the pirate's code to apply, and you're not. And thirdly, the code is more what you call guidelines than actual rules. Welcome aboard the Black Pearl, Miss Turner.

Id. at fn. 8. The self-proclaimed behavioral similarities between the BPAI and kidnapping pirates have been the subject of much consideration and discussion at the Bar, especially when the BPAI imposes a new grounds of rejection not previously imposed by the Examiner. *Id.* at 35.

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

30. *In re Bilski*, 545 F.3d 943, 949 (Fed. Cir. 2008)(*en banc*).

31. *Id.*

32. At least 30 *amicus* briefs were filed. *See id.* at 946–49 (listing *amicus* briefs filed on behalf of various organizations).

33. *Id.* at 949.

34. *Id.* at 943.

101:

Whoever 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, subject to the conditions and requirements of this title.³⁵

The Federal Circuit then confirms that they are dealing solely with the definition of statutory subject matter when the claim is directed to a “process” and not with regard to any other claim type:

The statute thus recites four categories of patent-eligible subject matter: processes, machines, manufactures, and compositions of matter. It is undisputed that Applicants’ claims are not directed to a machine, manufacture, or composition of matter. Thus, the issue before us involves what the term “process” in § 101 means, and how to determine whether a given claim—and Applicants’ claim 1 in particular—is a “new and useful process.”³⁶

Thus, as a first matter, given the amount of confusion that arises among casual observers and in prior decisions,³⁷ a “business method claim” must be clearly defined. In this regard, some observers often confuse claims that are recited in a *method* claim style that are directed to “business” subject matter (true “business method claims”) with claims recited in *any* claim style that are directed to “business” subject matter.³⁸ For example, claims recited in an apparatus style that are directed to “business” subject matter are *not* “business method claims”—they are directed toward a “machine” under 35 U.S.C § 101, *not* a process. Consequently, *Bilski* does not address “the patentability of business subject matter” generally, nor is *Bilski* directed to the recitation in a claim of business subject matter recited in an apparatus style. Instead, *Bilski* is only aimed at claims directed to business subject matter that are recited in a method claim style.

C. *Diamond V. Diehr: The Federal Circuit goes full circle*

After analyzing the statute, the Federal Circuit turned to Supreme Court precedent in *Diamond v. Diehr*, for the definition of a process that is compliant

35. *Id.* at 950–51.

36. *Id.*

37. Some confusion arises because although *State Street* is generally heralded as a case involving “business method patents,” the actual claims at issue in *State Street* were system claims, not process/method claims. Consequently, it is more precise to regard *State Street* as holding that “business subject matter” is not excluded from patentability under Sec. 101, rather than limiting the holding of *State Street* solely to business subject matter claimed as a method claim. Although *State Street* only involved system claims, the contemporary decision in *AT&T Corporation v. Excel Communications, Inc.*, (50 USPQ 2d 1447 (Fed. Cir. 1999)) did address method claims and confirmed the application of the principles of *State Street* to method claims.

38. For example, many commentators have argued that *State Street* holds that “business method patents” are statutory subject matter. However, the claim at issue in *State Street* were system claims, not method claims, so their reporting is somewhat strained. However, by holding that business subject matter was *not per se* excluded from patentability, *State Street* provides the opportunity for business subject matter to be claimed using any of the statutory categories set forth in Sec. 101, including process/method claims.

with the requirements of § 101.³⁹ In general, the Federal Circuit's adoption of *Diehr* is in line with their recent, post-*KSR*⁴⁰ posture of staying very close to Supreme Court precedent.

Specifically, the Federal Circuit re-endorses the holding in *Diehr* that, while a claim drawn to a fundamental principle is unpatentable, a specific application of a fundamental principle is indeed patentable subject matter.⁴¹

The Court declared that while a claim drawn to a fundamental principle is unpatentable, "an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." . . . The Court in *Diehr* thus drew a distinction between those claims that "seek to pre-empt the use of" a fundamental principle, on the one hand, and claims that seek only to foreclose others from using a particular "application" of that fundamental principle, on the other *Diehr* can be understood to suggest that whether a claim is drawn only to a fundamental principle is essentially an inquiry into the scope of that exclusion; i.e., whether the effect of allowing the claim would be to allow the patentee to pre-empt substantially all uses of that fundamental principle. If so, the claim is not drawn to patent-eligible subject matter.⁴²

As previously mentioned, all patents represent an economic tradeoff and the Federal Circuit in *Bilski* appears to be returning to the basic principles that, while granting a patent on an innovation is good in that it may provide a benefit to the populace, if the scope of protection provided by the patent is too broad, it may cripple or delay future innovation to the detriment of the populace.

D. *Adopted: The Machine-Or-Transformation Test*

In *Bilski*, the Federal Circuit reiterates and re-endorses the test provided in *Diehr* and other Supreme Court precedents.⁴³ This test is known as the machine-or-transformation test. As specifically stated in *Bilski*:

The Supreme Court, however, has enunciated a definitive test to determine whether a process claim is tailored narrowly enough to encompass only a particular application of a fundamental principle rather than to pre-empt the principle itself. A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.⁴⁴

39. *Id.* at 951.

40. *KSR v. Teleflex*, 550 U.S. 398 (2007).

41. *Bilski*, at 952.

42. *Id.* at 953. (emphasis in original) (citations omitted).

43. See *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972) (stating that the clue to patentability of a process claim that does not include particular machines is the transformation and reduction of an article to "a different state or thing"); see also *Cochrane v. Deener*, 94 U.S. 780, 788 (1876) (discussing how a process is an act performed on the subject-matter "to be transformed and reduced to a different state or thing").

44. *Id.* at 952 (citations omitted).

The Court also seeks to address the basic principles inherent in the underlying economic tradeoff embodied in a patent. The Court explicitly recognizes that the patent that preempts a principle of operation is too broad, while a patent with a lesser scope may be statutory subject matter.⁴⁵

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 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.⁴⁶

E. Bilski's Corollary Questions

In the next part of the *Bilski* opinion, the Federal Circuit recognizes that the Supreme Court precedent in *Benson*⁴⁷ may have been “initially equivocal.”⁴⁸ In this regard, the Federal Circuit recognizes that they are attempting to “read the tea leaves” and come up with a cohesive synthesis of the decades-old Supreme Court precedent. The Federal Circuit appears to recognize that the holding in *Diehr* may not be as cut-and-dry as the Federal Circuit is portraying it, but they are attempting to do their best and stick closely to Supreme Court precedents.

The Federal Circuit also recognizes that technological developments present challenges for the machine-or-transformation test, and that the Supreme Court may decide to modify or set aside that test.⁴⁹ However, at this time, the Federal Circuit is sticking with what they view as the controlling Supreme Court precedent—the machine-or-transformation test.

In the next part of the *Bilski* opinion, the Federal Circuit reiterates, from *Diehr*, that insignificant post-solution activity will not transform an unpatentable principle into a patentable process.⁵⁰

Also, the Federal Circuit reiterates from the *Diehr* case that the language in 35 U.S.C. § 101 that a “new and useful” process is “a general statement of the type of subject matter that is eligible for patent protection” and does not implicate sections 102 or 103.⁵¹

Further, the Federal Circuit clarifies that the claim must be considered as a whole—not element-by-element—when determining whether the claim recites statutory subject matter:

45. *Id.* at 954.

46. *Id.*

47. *Benson*, *supra* note 31.

48. *Bilski*, 545 F.3d at 956.

49. *Id.*

50. *Id.* at 957.

51. *Id.* at 958.

[T]he Court has made clear that it is inappropriate to determine the patent-eligibility of a claim as a whole based on whether selected limitations constitute patent-eligible subject matter. . . . After all, even though a fundamental principle itself is not patent-eligible, processes incorporating a fundamental principle may be patent-eligible. Thus, it is irrelevant that any individual step or limitation of such processes by itself would be unpatentable under § 101.⁵²

F. The Prior Tests Are Explicitly Discarded

In addition to adopting the machine-or-transformation test as the official test for determining when a process claim recites statutory subject matter, the Federal Circuit then proceeded to quite clearly throw out all other tests. More specifically, the Federal Circuit threw out the *Freeman-Walter-Abele* test:⁵³

In light of the present opinion, we conclude that the *Freeman-Walter-Abele* test is inadequate. Indeed, we have already recognized that a claim failing that test may nonetheless be patent-eligible. . . . Rather, the machine-or-transformation test is the applicable test for patent-eligible subject matter.⁵⁴

The Court also threw out the *State-Street/AT&T* test.⁵⁵

To be sure, a process tied to a particular machine, or transforming or reducing a particular article into a different state or thing, will generally produce a “concrete” and “tangible” result as those terms were used in our prior decisions. But while 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 a principle, that inquiry is insufficient to determine whether a claim is patent-eligible under § 101. And it was certainly never intended to supplant the Supreme Court’s test. Therefore, we also conclude that the “useful, concrete and tangible result” inquiry is inadequate and reaffirm that the machine-or-transformation test outlined by the Supreme Court is the proper test to apply.⁵⁶

The Federal Circuit also rejected the “Technological Arts Test” that was advocated by the USPTO:⁵⁷

We next turn to the so-called “technological arts test” that some *amici* urge us to adopt. We perceive that the contours of such a test, however, would be unclear because the meanings of the terms “technological arts” and “technology” are both ambiguous and ever-changing. And no such test has ever been explicitly adopted by the Supreme Court, this court, or our predecessor court, as the Board

52. *Id.*

53. *Id.* at 958–59.

54. *Id.* at 959.

55. *Id.* at 959–60.

56. *Id.* at 960.

57. *Id.* at 960.

correctly observed here. Therefore, we decline to do so and continue to rely on the machine-or-transformation test as articulated by the Supreme Court.⁵⁸

G. Application of Machine-or-Transformation Test to Bilski

Turning to the specific claims in *Bilski*, the Federal Circuit recognized that the machine-or-transformation test is a two-branched inquiry and that a claim may be shown to be statutory subject matter by satisfying either branch.⁵⁹ Further, the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope, and the involvement of the machine or transformation in the claimed process must not merely be insignificant post-solution activity.⁶⁰

However, in the present case, *Bilski* admitted that the language of the claim at issue is not limited to a specific machine or apparatus.⁶¹ Consequently, the "machine" branch of the machine-or-transformation test is not available to establish the claim as statutory subject matter and *Bilski* relies on the "transformation" branch.⁶²

However, the Federal Circuit found that the claim did not satisfy the transformation test because the claim only recited abstract concepts that were not representative of physical objects, and consequently could not be "transformed."⁶³ The court stated:

We hold that the Applicants' process as claimed does not transform any article to a different state or thing. Purported transformations or manipulations simply of public or private legal obligations or relationships, business risks, or other such abstractions cannot meet the test because they are not physical objects or substances, and they are not representative of physical objects or substances. Applicants' process at most incorporates only such ineligible transformations⁶⁴

Consequently, because the claim failed the "transformation" branch and was admitted by *Bilski* to be outside the "machine" branch, the claim is outside the boundaries of statutory subject matter and therefore non-patentable.⁶⁵ The Court concluded:

Thus, claim 1 does not involve the transformation of any physical object or substance, or an electronic signal representative of any physical object or substance. Given its admitted failure to meet the machine implementation part of the test as well, the claim entirely fails the machine-or-transformation test and is not drawn to patent-

58. *Id.*

59. *Id.* at 961.

60. *Id.* at 961–62.

61. *Id.* at 962.

62. *Id.*

63. *Id.* at 963–64.

64. *Id.*

65. *Id.* at 964.

eligible subject matter.⁶⁶

H. *How Transformative Must A Transformation Be?*

The Federal Circuit found that the “transformation” branch of the machine-or-transformation test is not limited solely to the transformation of physical objects—the transformation of data representative of a physical object is also sufficient:

We further note for clarity that the electronic transformation of the data itself into a visual depiction in *Abele* was sufficient; the claim was not required to involve any transformation of the underlying physical object that the data represented.⁶⁷

However, mere data gathering is not sufficiently transformative:

We note that, at least in most cases, gathering data would not constitute a transformation of any article. A requirement simply that data inputs be gathered—without specifying how—is a meaningless limit on a claim to an algorithm because every algorithm inherently requires the gathering of data inputs. . . . Further, the inherent step of gathering data can also fairly be characterized as insignificant extra-solution activity.⁶⁸

I. *Limitations on the Federal Circuit’s Holding In Bilski*

Reciting business subject matter using an apparatus/system claim under the “machine” statutory class of 35 U.S.C. § 101 is not addressed in *Bilski*—only the “process/method” statutory class is addressed.⁶⁹ Thus, if you are reciting business subject matter in a method claim, the claim must now pass the machine-or-transformation test, where the process/method claim is only statutory subject matter under § 101 if (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. Further, the recitation of the machine or transformation may not be merely insignificant post-solution activity or mere data gathering.⁷⁰

Bilski is an important decision both because of its clarity as to the specific procedural steps needed to determine whether a claim recited statutory subject matter and because it was rendered *en banc*. To the relief of many observers, *Bilski* appears to set forth a workable methodology for eliminating the outliers that have been attempting to patent abstract ideas or fundamental principles.⁷¹ However, *Bilski* still preserves the ability of inventors to obtain the substantial rights to their specific implementations of their invention thereby maintaining the underlying motivation for inventors to patent their innovations in the first

66. *Id.*

67. *Id.* at 962.

68. *Id.* at 963.

69. *Id.* at 957.

70. *Id.*

71. See *Id.* at 957–58 (clarifying the holding of *Dier* and stating that a claim that is tied to a particular machine is not drawn to the principle in abstract).

place. Thus *Bilski* strikes a good balance between allowing the patenting of proper business methods while not allowing the impermissible preemption of an abstract or fundamental principle.

IV. POST-*BILSKI* DECISIONS AT THE FEDERAL CIRCUIT

After the publication of the *Bilski* decision, the Federal Circuit has released two opinions dealing with the determination of statutory subject matter for process claims: *In re Comiskey*⁷² and *In re Ferguson*.⁷³

A. *In re Comiskey*

Acting *en banc*, the Federal Circuit vacated an earlier September 20, 2007 (pre-*Bilski*) opinion and reassigned the case to the panel for revision.⁷⁴ The revised *Comiskey* opinion issued on January 13, 2009.⁷⁵ In *Comiskey*, the Examiner found the claims to be obvious under § 103 and that decision was confirmed by the BPAI.⁷⁶ *Comiskey* appealed to the Federal Circuit and the issue of whether the claims constituted statutory subject matter under § 101 was raised for the first time.⁷⁷

Independent claims 1 and 32 were directed to a method while independent claims 17 and 46 were directed to a system.⁷⁸ Representative claims one and seventeen are reproduced below:

1. A method for mandatory arbitration resolution regarding one or more unilateral documents comprising the steps of:

enrolling a person and one or more unilateral documents associated with the person in a mandatory arbitration system at a time prior to or as of the time of creation of or execution of the one or more unilateral documents;

incorporating arbitration language, that is specific to the enrolled person, in the previously enrolled unilateral document wherein the arbitration language provides that any contested issue related to the unilateral document must be presented to the mandatory arbitration system, in which the person and the one or more unilateral documents are enrolled, for binding arbitration wherein the contested issue comprises one or more of a challenge to the documents, interpretation of the documents, interpretation or application of terms of the documents and execution of the documents or terms of the documents;

requiring a complainant to submit a request for arbitration

72. *In re Comiskey*, 554 F.3d 967 (Fed. Cir. 2009).

73. *In re Ferguson*, 558 F.3d 1359 (Fed. Cir. 2009).

74. *In re Comiskey*, 545 F.3d 967, 969 (Fed. Cir. 2009).

75. *Id.*

76. *Id.* at 969.

77. *Id.* at 972.

78. *Id.* at 970–71.

resolution to the mandatory arbitration system wherein the request is directed to the contested issue related to the unilateral document containing the arbitration language;

conducting arbitration resolution for the contested issue related to the unilateral document in response to the request for arbitration resolution;

providing support to the arbitration resolution; and

determining an award or a decision for the contested issue related to the unilateral document in accordance with the incorporated arbitration language, wherein the award or the decision is final and binding with respect to the complainant.⁷⁹

17. A system for mandatory arbitration resolution regarding one or more unilateral documents comprising:

a registration module for enrolling a person who is executing and one or more unilateral documents associated with the person in a mandatory arbitration system at a time prior to or as of the time of creation of or execution of the one or more unilateral documents;

an arbitration module for incorporating arbitration language, that is specific to the enrolled person, in the previously enrolled unilateral document wherein the arbitration language provides that any contested issue related to the unilateral document must be presented to the mandatory arbitration system, in which the person and the one or more unilateral documents are enrolled, for binding arbitration wherein the contested issue comprises one or more of a challenge to the documents, interpretation of the documents, interpretation or application of terms of the documents and execution of the documents or terms of the documents; and for providing this arbitration language to the enrolled person;

an arbitration resolution module for requiring a complainant to submit a request for arbitration resolution to the mandatory arbitration system wherein the request is directed to the contested issue related to the unilateral document containing the arbitration language; and

a means for selecting an arbitrator from an arbitrator database to conduct an arbitration resolution for the contested issue related to the unilateral document in response to the request for arbitration resolution, for providing support to the arbitrator, and where the arbitrator determines an award or a decision for the contested issue related to the unilateral document in accordance with the incorporated arbitration language, wherein the award or the decision is final and binding with respect to the complainant.⁸⁰

79. *Id.* at 970 n.1.

80. *Id.* at 970 n.3.

The first *Comiskey* decision was rendered before *Bilski*,⁸¹ so the Court was reluctant to cite *Bilski* in its analysis in the later *Comiskey* opinion. However, the Court's analysis in the later *Comiskey* opinion mirrored the *Bilski* opinion in that the Court first cites to the identification of the four statutory classes in § 101 and then mentions the machine-or-transformation test using the same Supreme Court precedent that was endorsed in *Bilski*.⁸²

Similar to *Bilski*, with regard to method claims 1 and 32, *Comiskey* conceded that the claims do not require a machine.⁸³ However, the Court did not apply the machine-or-transformation test using a direct citation of *Bilski*. Instead, the Court found that the method claims were not statutory matter since they simply recited the use of mental processes.⁸⁴

However, with regard to system claims 17 and 46, the Court notes that the use of "modules" and the "means for selecting an arbitrator" as recited in the claims. The court subsequently determines that the claims could require the use of a machine under the broadest reasonable interpretation of the claims.⁸⁵ However, the Court notes that the USPTO has not had the opportunity to address the § 101 issue with regard to these claims and consequently remands the patent application back to the USPTO for further consideration of the system claims.⁸⁶

Comiskey opinion may have proved difficult to write because, although it needed to maintain the standards set post-*Bilski*, it could not directly cite *Bilski*. Consequently, the Court was unable to apply some of the clear distinctions that arose from *Bilski*: namely, that process/method claims—and only process/method claims—are reviewed for statutory subject matter by using the machine-or-transformation test.⁸⁷ Instead, some commentators have attempted to read *Comiskey* as allowing the machine-or-transformation test to apply to statutory classes beyond process.⁸⁸ However, any such analysis ignores the context of the *Comiskey* decision and is most likely misguided.

B. *In re Ferguson*

In re Ferguson was decided by the Federal Circuit on March 6, 2009.⁸⁹ In *Ferguson*, the applicant's claims 1-68 were first rejected by the Examiner under 35 U.S.C. § 102 as anticipated, under 35 U.S.C. § 103 as obvious, and/or 35 U.S.C. § 112.⁹⁰ The applicant appealed the Examiner's rejection to the

81. *In re Comiskey*, 499 F.3d 1365 (Fed. Cir. 2007) (taking place more than one year before *Bilski*).

82. *Comiskey* at 978–79.

83. *Id.* at 981.

84. *Id.*

85. *Id.* at 1379.

86. *Id.* at 1380–81.

87. *In re Bilski*, 545 F.3d 943, 956 (Fed. Cir. 2008) (“[W]e . . . reaffirm that the machine-or-transformation test, properly applied is the governing test for determining patent eligibility of a process under §101.”).

88. See *infra* Parts V.A, VI, VII.E.

89. *In re Ferguson*, No. 2007-1232 (Fed. Cir. 2009).

90. *Id.* slip op. at 1.

BPAI.⁹¹ On appeal, the BPAI did not sustain any of the Examiner's rejections, but instead issued a new rejection under 35 U.S.C. § 101 that the claims failed to recite statutory subject matter.⁹²

Specifically, while the BPAI found that method claims 1–23 and 36–68 fell within one of the four categories of statutory subject matter, they were directed to “abstract ideas” and consequently were not patent eligible.⁹³ With regard to claims 24–35, the claims recited a “paradigm,” which the BPAI found did not fall into one of the four classes of statutory subject matter and consequently was also not eligible for a patent.⁹⁴ The BPAI decision was originally issued on August 27, 2004 and then re-issued on July 27, 2006 in order to conform with the then newly-issued USPTO Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility.⁹⁵

The Federal Circuit began its analysis of the Ferguson claims by citing to the four specifically identified classes of statutory subject matter recited in § 101—namely, process, machine, manufacture, and composition of matter—and then reaffirmed that a claim must fall within one of the statutory classes to be patent-eligible subject matter.⁹⁶ However, citing *Bilski*, the Federal Circuit confirmed that even if a claim fits in one of the four statutory classes, the claim may still be found to be non-statutory.⁹⁷

Claim 1⁹⁸ of *Ferguson* is representative of the method claims 1–23 and 36–68:

1. A method of marketing a product, comprising:

developing a shared marketing force, said shared marketing force including at least marketing channels, which enable marketing a number of related products;

using said shared marketing force to market a plurality of different products that are made by a plurality of different autonomous producing company, so that different autonomous companies, having different ownerships, respectively produce said related products;

obtaining a share of total profits from each of said plurality of different autonomous producing companies in return for said using; and

obtaining an exclusive right to market each of said plurality of products in return for said using.⁹⁹

Thus, similar to the method claims at issue in *Bilski*, claim 1 of Ferguson

91. *Id.*

92. *Id.*

93. *Id.* at 3–4.

94. *Id.* at 5.

95. *Id.* at 2.

96. *Id.* at 2–3.

97. *Id.* at 4.

98. *Id.* at 1.

99. *Id.* at *1.

does not include a specific use of a machine. Ferguson attempted to argue that the recitation in the claim of a “marketing force” added sufficient structure, but the Court did not agree.¹⁰⁰

Instead, the Court found the machine-or-transformation test of *Bilski* to be dispositive.¹⁰¹ More specifically, the Court found that the claims were not tied to a particular machine or apparatus because, as recently recited in *In re Nuijten*, a “machine” is “a concrete thing consisting of parts, or of certain devices and combination of devices.”¹⁰² Conversely, the Court did not find any recitation of a machine in the claims.¹⁰³

With regard to the transformation arm of the *Bilski* test, the Court quoted *Bilski*, “[p]urported transformations or manipulations simply of public or private legal obligations or relationships, business risks, or other such abstractions cannot meet the test because they are not physical objects or substances, and they are not representative of physical objects or substances.”¹⁰⁴

The Court found that the present method claims fell nominally inside the situation mentioned in *Bilski*.¹⁰⁵ Consequently, method claims 1–23 and 36–68 failed to recite statutory subject matter even though they fell within the statutory class of “process” in 35 U.S.C. § 101.¹⁰⁶

With regard to claims 24–35 reciting a “paradigm,”¹⁰⁷ claim 24 presented below is representative:

A paradigm for marketing software, comprising:

a marketing company that markets software from a plurality of different independent and autonomous software companies, and carries out and pays for operations associated with marketing of software for all of said different independent and autonomous software companies, in return for a contingent share of a total income stream from marketing of the software from all of said software companies, while allowing all of said software companies to retain their autonomy.¹⁰⁸

With regard to the paradigm claims, again the Court turned first to the recitation of the four statutory classes in 35 U.S.C. § 101.¹⁰⁹ The Court then proceeded to review each of the statutory classes and determine that the paradigm claims did not fit in any of them.¹¹⁰ More specifically, the paradigm claims did not fit in the “process” statutory class because no act or series of

100. *Id.* at 3.

101. *Id.* at 3–6.

102. *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007) (quoting *Burr v. Duryee*, 68 U.S. 531, 570 (1863)).

103. *In re Ferguson*, No. 2006-1286, 2009 WL 565074, at * 3–6 (Fed. Cir. March 6, 2009).

104. *In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008).

105. *In re Ferguson*, No. 2007-1232 at *3–6.

106. *Id.* at 5–6.

107. *Id.* at 1.

108. *Id.* at 1.

109. *Id.* at 5.

110. *Id.*

acts were required.¹¹¹ Further, the paradigm claims did not fit in the “manufacture” statutory class because the marketing company itself is not an article resulting from the process of manufacture.¹¹² Nor did the paradigm claims fit as a composition of matter.¹¹³ Finally, with regard to the “machine” statutory class, the Court again cited to *Nuijten* for the concept that a machine must have physical parts, and found that the recitation of a company in the claim lacked the requisite physical parts to qualify as a machine.¹¹⁴ Consequently, the Court determined that the paradigm claims did not fit inside any of the statutory classes and were, therefore, not statutory subject matter for a claim.¹¹⁵

What is important to observe here is that again the Court’s analysis is quite formulaic. First, the court determines whether the claim fits in one of the four statutory classes of 35 U.S.C. § 101. If not, the claim is not statutory subject matter. Next, even if the claim fits inside one of the statutory classes, the claim still may not be statutory subject matter.¹¹⁶ More specifically, with regard to the process class, the claim must meet the machine-or-transformation test of *Bilski* to be statutory subject matter.¹¹⁷

V. THE USPTO INTERPRETATION OF *BILSKI*

A. USPTO Memorandum of May 15, 2008

Periodically, the USPTO releases Memoranda to the Examining Corps¹¹⁸ setting forth the policy that Examiners should apply when examining patent applications. In this regard, on May 15, 2008, the USPTO issued a memorandum advising its Examiners about the procedure that the Examiners should apply when determining whether a method claim complies with § 101.¹¹⁹

It is notable that the USPTO issued its memorandum the week after it argued its position in *Bilski* before the Federal Circuit and several months before the *Bilski* decision was issued by the Federal Circuit.¹²⁰ In the

111. *Id.*

112. *Id.*

113. *Id.*

114. *Id.*

115. *Id.*

116. *Id.* at 4.

117. *Id.*

118. See United States Patent and Trademark Office, Memorandum to the Examining Corps, <http://www.uspto.gov/web/patents/memorandum.htm> (last visited May 15, 2009) (listing the memoranda).

119. Memorandum from John J. Love, Deputy Comm’r for Patent Examination Policy, to Tech. Ctr. Dirs. (May 15, 2008), available at http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/section_101_05_15_2008.gov.

120. The USPTO issued its memorandum on May 15, 2008. *Id.* The date of oral arguments before the en banc Federal Circuit was May 8, 2008. *In re Bilski*, 545 F.3d 943, 949 (Fed. Cir. 2008). The *Bilski* decision was issued on October 30, 2008. *Id.* at 943. Some agencies may have wished to receive and examine the opinion of the Court deciding the issue before instructing their staff to act as if the position that the administrative agency was had recently argued was actually the law.

Memorandum, the USPTO summarized the argument that it had made to the Federal Circuit the previous week regarding the process for determining whether a claim recites statutory subject matter. The argued the process involves first determining whether the claim falls within one of the four statutory categories of § 101 and second, if the claim is a process claim, then it must be tied to another statutory class or transforming the underlying subject matter. If the claim does not meet these requirements, then the claim is not statutory.¹²¹

The Memorandum also included a further step that if the claim was determined to be statutory subject matter, the Examiner should then determine whether the claim falls within a judicial exception, such as law of nature, natural phenomena, or abstract ideas.¹²² If the claim falls within such a judicial exception, then the claim should be rejected under § 101. The Memorandum also emphasized that the determination of whether the claim is directed to a statutory category is a separate inquiry from determining whether the claimed invention falls within a judicial exception.¹²³

The first process that the Memorandum discussed is similar to the machine-or-transformation test that later appeared in the *Bilski* decision. However, the second process that determines whether the claim falls within a judicial exception does not appear to be supported by the *Bilski* decision.

B. USPTO Memorandum of January 7, 2009

On January 7, 2009, the USPTO sent a Memorandum to the Examining Corps offering further guidance regarding examining process claims under *Bilski*.¹²⁴ In the Memorandum, the USPTO reiterated the machine-or-transformation test from *Bilski* and acknowledged that the *Bilski* test differed from the test set forth in the USPTO's Memorandum of May 15, 2008.¹²⁵

Although the Memorandum mentions the *Bilski* corollaries that a mere field-of-use limitation and insignificant post-solution activity are both inadequate to establish compliance with § 101, the Memorandum does not make any mention of the separate determination discussed in its earlier Memorandum of whether an otherwise statutory claim falls within a judicial exception.¹²⁶

Finally, the Memorandum of January 7, 2009 noted that the USPTO was still studying *Bilski* and redrafting their guidelines.¹²⁷

C. Analysis

Bilski was a contested case and, although the USPTO argued that the

121. Love, *supra*, note 119.

122. *Id.* at 2.

123. *Id.* at 2.

124. Love, *supra*, note 119.

125. *Id.* at 1.

126. *Id.*

127. *Id.*

Federal Circuit should adopt its position, the Court is by no means bound to do so. Consequently, the USPTO may have jumped the gun somewhat by issuing guidance to the Examining Corps a mere week after it had orally argued its position in *Bilski* before the Federal Circuit. Although the guidance issued to the Examining Corps in the USPTO's Memorandum of May 15, 2008 is similar in some ways to the machine-or-transformation test set forth by the Federal Circuit in *Bilski*, significant elements of the May 15th Memorandum, such as the separate determination of whether the claim falls within a judicially-created exception, were not adopted in *Bilski*. Consequently, because the USPTO's Memorandum to the Examining Corps authorizing them to apply the *Bilski* test was not released until January 9, 2009, there was roughly an eight month period where Examiners were instructed to examine process/method claims using criteria that were somewhat different from those eventually adopted by the Federal Circuit.

VI. APPLICATION OF *BILSKI* AT THE BPAI

Once the Federal Circuit published the *Bilski* opinion, the BPAI was obliged to follow its holding. Appendix A provides a listing of all twenty-six BPAI decisions that cite *Bilski* from October 30, 2008 (the date the *Bilski* decision was published) until March 15, 2009.

Most of the BPAI's decisions citing *Bilski* address fairly straightforward situations where the BPAI is only called upon to determine whether certain process/method claims are statutory.¹²⁸ In these situations, the various panels of the BPAI correctly apply *Bilski* in the overwhelming majority of cases.

However, despite the Federal Circuit's clear recitation in *Bilski* that their holding only applies to process/method claims, some of the BPAI decisions apply *Bilski* to claims outside process/method claims, such as "machine" claims and "manufacture" claims. It should be clearly stated at the outset that the overwhelming majority of decisions rendered by the BPAI are well-supported. However, some of the decisions applying *Bilski* outside of process/method claims may represent an outlier from the BPAI's earned reputation for extremely high quality as further discussed below.

A. *Ex parte Bo Li*

Ex Parte Bo Li was decided on November 6, 2008.¹²⁹ Claim 42 is exemplary:

42. A computer program product, comprising a computer usable medium having a computer readable program code embodied therein, said computer readable program code adapted to be executed to implement a method for generating a report, said method comprising:

128. See e.g., *Ex parte Susarla*, Appeal No. 2008-2059, 15-17 (B.P.A.I. Mar. 11, 2009) (applying *Bilski* and rejecting claims because "claimed invention is directed to non-statutory subject matter").

129. *Ex parte Bo Li*, Appeal No. 2008-1213 (B.P.A.I. Nov. 6, 2008).

providing a system, wherein the system comprises distinct software modules, and wherein the distinct software modules comprise a logic processing module, a configuration file processing module, a data organization module, and a data display organization module;

parsing a configuration file into definition data that specifies: a data organization of the report, a display organization of the report, and at least one data source comprising report data to be used for generating the report, and wherein said parsing is performed by the configuration file processing module in response to being called by the logic processing module;

extracting the report data from the at least one data source, wherein said extracting is performed by the data organization module in response to being called by the logic processing module;

receiving, by the logic processing module, the definition data from the configuration file processing module and the extracted report data from the data organization module; and

organizing, by the data display organization module in response to being called by the logic processing module, a data display organization of the report, wherein said organizing comprises utilizing the definition data received by the logic processing module and the extracted report data received by the logic processing module.¹³⁰

Claim 42 is not a process/method style claim; instead, it is a Beauregard-style claim.¹³¹ Of the four classifications of statutory subject matter recited in 35 U.S.C. § 101, a Beauregard claim is typically regarded as falling under the “manufacture” classification, also referred to as the “product” classification.¹³² The BPAI agrees with this determination in *Li* and even cites to the Manual of Patent Examining Procedure in support of the proposition. “It has been the practice for a number of years that a ‘Beauregard Claim’ of this nature be considered statutory at the USPTO as a product claim. (MPEP 2105.01, I)”¹³³

However, the holding of the case is somewhat muddled because the BPAI appears to suggest that *Bilski* applies to Beauregard claims even though the BPAI finds that the Beauregard claims fall in a different statutory classification:

The Examiner’s argument [for claim 42] centers on the test for being statutory by producing “a useful, concrete and tangible result” as indicated in *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*

130. *Id.* at 3–4.

131. *Id.* at 9.

132. Andrei Iancu & Jeremiah Helm, *Code on Disks and Hat Tricks—Is Computer Software on a Medium Really Patentable?*, 90 J. PAT. & TRADEMARK OFF. SOC’Y 97, 100 (2008) (describing the position of the Patent Office as recognizing that the subject matter of a Beauregard claim is “patentable as an article of manufacture”); see also Sean Fernandes, *Microsoft Corp. v. AT&T: A Welcome Return to Patent Law’s Tradition of Territoriality*, 23 BERKELEY TECH. L.J. 75, 97 n.189 (2008) (“[A] Beauregard claim . . . is a product claim for a computer-readable medium containing a set of instructions a computer can execute.”).

133. *Ex parte* Bo Li, Appeal No. 2008-1213 at 9.

In accordance with *In re Bilski* the arguments of *State Street* will no longer be considered dispositive of this issue.¹³⁴

We note that *Bilski* explicitly dealt with claims of the process/method classification under § 101.¹³⁵ Thus, for process/method claims, the BPAI is quite correct that the “useful, concrete and tangible” test of *State Street* is no longer the law. However, *Bilski* is not the dispositive test for determining whether claims falling in the other classifications of 35 U.S.C. § 101 represent statutory subject matter. That is, *Bilski* is clearly the test for the “process” classification, but is not the test for the “machine,” “manufacture,” or “composition of matter” classifications.

Further, because *Bilski* did not extend outside of the “process” classification, but *State Street* addressed claims falling inside the “machine” classification, there is a good argument that “machine” claims should still be considered under the *State Street* test, even though “process” claims must be considered under *Bilski*.

Here, the BPAI should probably have followed the process outlined in *Bilski*: first determine the statutory classification that the claim occupies, and then apply the machine-or-transformation test only if the claim occupies the “process” classification. If the claim occupies another classification, then the BPAI should most likely not be turning to *Bilski* as dispositive of the issue.

With regard to the BPAI’s decision for claim 42, the BPAI recognizes that claim as a *Beauregard* claim rather than a “process” claim, but appears to suggest that *Bilski* may still apply. The BPAI then finds that claim 42 does recite statutory subject matter. However, the basis of its decision is not clear.¹³⁶ Although the BPAI mentions *Bilski* in its decision, it also mentions that *Beauregard* claims have long been considered statutory by the USPTO, and that claim 42 recites certain components embodied on a software medium and that such a combination has also previously been found to be statutory.¹³⁷ Thus, in the final analysis, it is somewhat unclear what basis the BPAI is using for its determination that claim 42 is statutory subject matter.

B. *Ex Parte Cornea-Hasegan*

Ex Parte Cornea-Hasegan was decided on January 13, 2009.¹³⁸ Claim 1 is representative of the method claims and claim 18 is representative of the *Beauregard* claims in the application:

1. A method, comprising:

normalizing by a processor operands a, b, and c for a floating-point operation;

134. *Id.* at 8 (citations omitted).

135. *Ex Parte Bilski*, No. 2002-2257, 5–6 (B.P.A.I. Mar. 8, 2006).

136. *Ex parte Bo Li*, Appeal No. 2008-1213, at 8 (B.P.A.I. Nov. 6, 2008) available at <http://des.uspto.gov/Foia/ReterivePdf?system=BPAI&fNm=fd20081213-11-06-2008-1>.

137. *Id.* at 8–9.

138. *Ex parte Cornea-Hasegan*, Appeal No. 2008-4742, at 1 (B.P.A.I. Jan. 13, 2009), available at <http://des.uspto.gov/Foia/ReterivePdf?system=BPAI&fNm=fd20084742-01-13-2009-1>.

predicting by the processor whether result d of said floating-point operation on said a, b, c might be tiny;

if so, then scaling by the processor said a, b, c to form a', b', c'; calculating by the processor result d' of said floating-point operation on said a', b', c';

determining by the processor whether said d is tiny based upon said result d';

if so, then calculating by the processor said d using software; and

if not, then calculating by the processor said d using floating-point hardware.

18. A computer readable media including program instructions which when executed by a processor cause the processor to perform the following:

normalizing operands a, b, and c for a floating-point operation;

utilizing the results of a hardware prediction unit predicting whether result d of said floating-point operation on said a, b, c might be tiny;

if so, then scaling said a, b, c to form a', b', c';

calculating result d' of said floating-point operation on said a', b', c';

determining whether said d is tiny based upon said result d';

if so, then calculating said d using software; and

if not, then calculating said d using floating-point hardware.¹³⁹

The BPAI determined that claim 1 fell under the "process" category of § 101 and consequently applied the machine-or-transformation test of *Bilski*.¹⁴⁰ The BPAI acknowledged the recitation of a "processor" in the claim, but found that it did not recite enough structure to tie the process to a specific machine and that claim 1 was non-transformative.¹⁴¹ More specifically, with regard to the machine arm of the test, the BPAI stated:

As discussed above, Appellant's claim 1 recites a method performed by a "processor." The recitation of a "processor" performing various functions fails to impose any meaningful limits on the claim's scope. The recitation of a "processor" performing various functions is nothing more than a general purpose computer that has been programmed in an unspecified manner to implement the functional steps recited in the claims. The recitation of a processor in combination with purely functional recitations of method steps, where the functions are implemented using an unspecified algorithm, is insufficient to transform otherwise unpatentable method steps into a

139. *Id.* at 2-3.

140. *Id.* at 10-11.

141. *Id.* at 9-10.

patent eligible process.¹⁴²

With regard to claim 18, it is written in Beauregard claim format like that employed in *Ex Parte Bo Li*. Also, as discussed above, the machine-or-transformation test of *Bilski* only applies to the “process” statutory category, and not the categories of “machine,” “manufacture,” or “composition of matter.”¹⁴³ However, in *Cornea*, although the BPAI recognizes that claim 18 is drawn to a “manufacture,” rather than a “process,” the court asserts that the same analysis is applicable and proceeds to use the *Bilski* test to confirm the Examiner’s rejection of claim 18 under § 101.¹⁴⁴

More explicitly, the BPAI found that:

Appellant contends that the claim is directed to an article of manufacture, and does not fall within a judicially-defined exception. . . . Even so, analysis of a “manufacture” claim and a “process” claim is the same under § 101. *See AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1999) (abrogated by *Bilski*, 545 F.3d 943) (“Whether stated implicitly or explicitly, we consider the scope of § 101 to be the same regardless of the form—machine or process—in which a particular claim is drafted.”); *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998) (abrogated by *Bilski*).¹⁴⁵

Interestingly, the BPAI noted that both of the cases that it cites in support of its proposition that “manufacture” and “process” claims should be analyzed the same way were abrogated by *Bilski*—but proceeds to reject the claims anyway.¹⁴⁶

Contrary to *Li*, here the BPAI is clearly applying *Bilski* to a “manufacture” claim, even though *Bilski* only directly addressed “process” claims. Thus, the BPAI is operating contrary to the procedure set forth in *Bilski* of first determining the statutory classification that the claim occupied, and then applying the machine-or-transformation test only if the claim occupied the “process” classification. As with *Li*, the claim here clearly occupies another classification, so the BPAI should most likely be turning to a decision other than *Bilski* for support.

C. *Ex Parte Atkin*

Ex Parte Atkin was decided on January 30, 2009.¹⁴⁷ Interestingly, the application in *Atkin* included method and system claims. Claim 1 is representative of the method claims,¹⁴⁸ and claim 9 is representative of the system claims.¹⁴⁹

142. *Id.*

143. *Ex parte Bilski*, No. 2002-2257, 5–6 (B.P.A.I. Mar. 8, 2006).

144. *Ex parte Cornea-Hasegan*, Appeal No. 2008-4742, at 11–12 (B.P.A.I. Jan. 13, 2009).

145. *Id.*

146. *Id.* at 12.

147. *Ex parte Atkin*, No. 2008-4352 (B.P.A.I. Jan. 30, 2009).

148. *Id.* at 11–12.

149. *Id.* at 16–17.

1. A method for converting a unidirectional domain name to a bidirectional domain name, said method comprising the steps of:

establishing a plurality of labels within a unidirectional domain name by using a pre-determined full stop punctuation mark as a delimiter between said labels, said labels having an original label display order as encountered from left to right;

within each said label, performing inferencing through resolving the direction of indeterminate characters by assigning a strong direction left or right to each indeterminate character; and

reordering said characters within each said label of said unidirectional domain name into character display order using the fully resolved characters previously inferenced, thereby converting said uni-directional domain name to a bidirectional domain name in which said original label display order is preserved, and bidirectionality of characters within each label is produced.

9. A system for converting a unidirectional domain name to a bidirectional domain name comprising:

a label definer adapted to establish a plurality of labels within a unidirectional domain name by using a pre-determined full stop punctuation mark as a delimiter between said labels, said labels having an original label display order as encountered from left to right;

an inferencer adapted to, within each said label, resolve the direction of indeterminate characters by assigning a strong direction left or right to each indeterminate character; and

a character reorderer adapted to reorder said characters within each said label of said unidirectional domain name into character display order using the fully resolved characters previously inferenced, thereby converting said uni-directional domain name to a bidirectional domain name in which said original label display order is preserved, and bidirectionality of characters within each label is produced.

With regard to method claim 1, the BPAI applied the machine-or-transformation test of *Bilski* and found that claim one did not recite statutory subject matter because it was not bound to a machine and was not transformatory.¹⁵⁰ However, such a decision is generally in agreement with the findings of several other panels and the process of reaching the decision arises fairly solidly from a strict reading of *Bilski*.¹⁵¹

However, the BPAI's finding with regard to claim 9 was more surprising. Claim 9 clearly recites in its preamble that it is a "system" claim rather than a

150. *Id.* at 15–16.

151. *In re Bilski*, 545 F.3d 943, 964 (Fed. Cir. 2008) (“[T]he machine-or-transformation test is the only applicable test and must be applied, in light of the guidance provided by the Supreme Court and this court, when evaluating the patent-eligibility of process claims”)

method claim, and this was recognized by the BPAI.¹⁵² If we are to apply the steps set forth in *Bilski*, we would first attempt to determine whether claim 9 fits inside any of the four statutory classes under § 101—process, machine, manufacture, or composition of matter. As a first matter, it would seem clear that claim 9 would not be a manufacture or a composition of matter, which leaves process and machine.

To help in deciding between process and machine, we note that claim 9 recites its claim elements structurally, rather than functionally. That is, claim 9 recites “a label definer,” a noun form, rather than “establishing a plurality of labels,” a verb form as recited in claim 1, which was found to be a process claim.¹⁵³ Consequently, claim 9 should most likely be construed as a “machine” rather than a “process” under § 101. However, the holding of *Bilski* is limited to application under the “process” statutory class.¹⁵⁴ Thus, as a “machine” rather than a “process,” *Bilski* should not be used in determining whether claim 9 recites statutory subject matter.

However, the Board took a different approach and proceeded to apply *Bilski* to claim 9.¹⁵⁵ More specifically, the Board stated:

The term “system” in the preamble is broad enough to read on a method and thus does not imply the presence of any apparatus. Although the body of the claim recites a “label definer,” an “inferencer,” and a “character reorderer,” *those recitations fail to serve as structural limitations* because (1) they are not “means” recitations subject to interpretation under 35 U.S.C. § 112, sixth paragraph, and (2) they would not have been understood in the art as implying any particular structure. Therefore, in accordance with *Ex parte Miyazaki*, 89 USPQ2d 1207 (BPAI 2008) (precedential), *we are treating claim 9 as encompassing any and all means for performing the recited functions . . .*

We are therefore additionally rejecting claims 9–12 and 15 under § 101 for reciting patent ineligible subject matter because, when construed in accordance with *Miyazaki* in the manner explained above . . . *those claims encompass any and all structures for performing the recited functions*. As a result, *claims 9–12 and 15 are at least as broad as method claims 1–4 and 13, which we have determined recite patent ineligible subject matter under Bilski*.¹⁵⁶

Thus, the BPAI asserted that the limitations recited in claim 9 failed to serve as structural limitations.¹⁵⁷ The BPAI asserted that they were treating claim 9 as encompassing any and all means or structures for performing the functions. Consequently, the BPAI asserted that claim 9 was at least as broad as claim 1 which did not meet the requirements of § 101 and was thus also

152. *Id.* at 16.

153. *Id.* at 16–17.

154. *Ex Parte Bilski*, No. 2002-2257, at 5–6 (B.P.A.I. Mar. 8, 2006).

155. *Id.* at 17–18.

156. *Id.* (emphasis added).

157. *Ex parte Atlin*, No. 2008-4352, 17 (B.P.A.I. Jan. 30, 2009).

non-statutory.¹⁵⁸

There are at least two problems here. First, this determination appears to be in opposition to the process set forth in *Bilski*. That is, even if one agrees with the Examiner's assertion that the elements recited in claim 9 encompass all means or structures for performing a function, mere breadth of claim scope does not transform a claim of one statutory class into a claim of another statutory class. Regardless of how tempting it may be to apply *Bilski*, the procedure set forth in the case must be followed. That is, first determine whether the claims fit in any statutory class, and if so, then only apply *Bilski* if the claims fall in the process statutory class. Here, the BPAI does not appear to make a clear determination of the statutory class of claim 9 and further does not establish that claim 9 is a process claim.¹⁵⁹ Consequently, *Bilski* would appear to not be implicated.

The BPAI's statement with regard to the scope of the claim may be true, but the test for applying *Bilski* is not "breadth," but a specific determination of the statutory class, with *Bilski* only applying to the process class.¹⁶⁰

Second, even if the claims encompass all means or structures for performing a function, the claim would still be a structural, rather than a functional, claim and consequently would be a machine rather than a process under § 101. This is not to suggest that claim 9 could never be found to lacking under § 101, but merely to suggest that the application of *Bilski* to claim 9 is improper because claim 9 is a structural claim and consequently falls under the "machine" class of § 101.

D. *Ex Parte* NAWATHE

Ex Parte Nawathe was decided on February 9, 2009.¹⁶¹ Similar to *Ex Parte Atkin*, *Nawathe* also included both method and structural claims, although in *Nawathe* the structural claims were identified as "apparatus" rather than "system" as in *Atkin*. Claim 1 is representative of the method claims¹⁶² and claim 25 is representative of the apparatus claims.

1. A computerized method comprising:

inputting multiple extensible Markup Language (XML) documents;
creating a data representation of said multiple XML documents;
and

reducing redundancy across said multiple XML documents via a
fixed

set of tables.

25. An apparatus comprising:

158. *Id.*

159. *Id.* at 16–17.

160. Compare *id.* at 18 with *Ex parte Bilski*, No. 2002-2257, n. 4 (B.P.A.I. Mar. 8, 2006).

161. *Ex parte Nawathe*, No. 2007-3360 (B.P.A.I. Feb. 9, 2009).

162. *Id.* at 2.

means for creating a graph based data structure representing multiple standard XML tree structures;

means for transforming said graph based data structure to a fixed set of tables; and

means for using said fixed set of tables.¹⁶³

Here, the BPAI applies the *Bilski* machine-or-transform test to claim 1 and finds that claim 1 is neither tied to a specific machine nor transformative.¹⁶⁴ Further, when the BPAI mentions *Bilski*, the BPAI explicitly notes that *Bilski* applies to process claims.¹⁶⁵ Additionally, the BPAI notes the Applicant's argument that claim 1 is directed to statutory subject matter under the useful, concrete, and tangible result test is moot since the Federal Circuit has cautioned against using this test in evaluating method claims for patent eligibility.¹⁶⁶

With regard to the apparatus claim 25, however, the BPAI does not apply *Bilski* and does not object to the Applicant's arguments of the useful, concrete, and tangible result test, as the BPAI did with regard to method claim one.¹⁶⁷ Instead, the BPAI found that claim 25 recited a physical apparatus for transforming a data structure into a fixed set of tables, and that it was not directed to an abstract idea.¹⁶⁸ Consequently, the Examiner's rejection of claim 25 under § 101 was reversed.

Here, the BPAI appears to make the right call in not applying *Bilski* to an apparatus claim. However, although we can read between the lines and note that the BPAI is not applying *Bilski* to the apparatus claims, the basis of the BPAI's analysis of the apparatus claims for statutory subject matter could have been more explicit. On the other hand, considering the somewhat unsettled condition of the law in this regard, it is certainly understandable that the decision writer would be somewhat conservative in the opinion.

E. ANALYSIS OF BPAI CITATION OF BILSKI

It is clear from *Bilski* that the decision only applies to process/method claims. Further, *Bilski* outlines a procedure (and *Ferguson* reiterates it) wherein a reviewer first determines whether a particular claim falls within any statutory class, and then only applies the machine-or-transformation test of *Bilski* if the claim falls in the "process" statutory class. Although the BPAI has successfully applied *Bilski* to process/method claims in many decisions, in a few decisions, the BPAI has been using *Bilski* to invalidate system and Beauregard claims, which fall outside the process/method statutory class. Such an application of *Bilski*, although seemingly convenient for resolving a case quickly, fails to acknowledge both the clear wording of *Bilski* and

163. U.S. Patent Application No. 20030188264, Claim 25.

164. *Id.* at 8–9.

165. *Nawathe*, No. 2007-3360 at 6–7.

166. *Id.* at 9.

167. *Ex parte Nawathe*, No. 2007-3060, at 9 (B.P.A.I. Feb. 9, 2009).

168. *Id.*

Ferguson, and the differing scope and impacts afforded to the different statutory classes of claims. For example one decision where claims in different statutory classes were found to differ in scope and impact is found in *NTP v. RIM*,¹⁶⁹ where “method” claims (arising under the “process classification” of § 101) were analyzed quite differently from “system” claims (arising under the “machine” classification of § 101).¹⁷⁰ More specifically, it was held that for a “method” claim to be infringed, all elements of the claim must be performed within the United States.¹⁷¹ Conversely, for a “system” claim, the claim may still be infringed if portions of the claimed system are located outside the United States.¹⁷²

Although many of the BPAI opinions are quite satisfactory, the BPAI should be careful to limit the application of *Bilski* solely to “process/method” claims as recited in the decision.

VII. CLAIM DRAFTING WITH *BILSKI* IN MIND

The case law with regard to how *Bilski* will be applied at the USPTO and BPAI is not quite settled at this time. However, it seems clear that claims drafted with structural limitations have less chance of running afoul of *Bilski*. Consequently, apparatus and system claims may be preferable to method claims. Additionally, product claims may also be preferable to method claims—with the caveat that the product must be tangible.¹⁷³ Finally, means-plus-function claims currently seem to avoid analysis under *Bilski* and consequently may be preferable to method claims, although the typically narrow construction of means-plus-function claims should be considered.

Further, when choosing to draft a method claim, the drafter should take the opportunity to recite a machine or apparatus that the method uses to perform. Conversely, when the drafter is attempting to recite the claim so broadly as to avoid tying the claim to a particular machine, they must realize that analysis under *Bilski* may be difficult, especially in the absence of a transformation. Also, when claiming that broadly, a drafter must recognize that they may possibly be operating contrary to the objectives of the patent system to provide an incentive for innovation without foreclosing an entire area of development. Although the members of the patent bar have a responsibility to zealously advocate for their clients, members of the patent bar should be aware that maximizing the overall technological return for the populace as a whole may represent a good reason why inventors should not be entitled to claims of such breadth.

Finally, the drafter may choose to draft a series of independent method claims with varying degrees of structure so as to present a broader range of choices for the Examiner. Such a strategy may also be helpful when enforcing

169. *NTP v. RIM*, 418 F.3d 1282, 1294–97 (Fed. Cir. 2005).

170. *See Id.* at 1317–18 (explaining the distinction between “system” claims and “method” claims).

171. *Id.* at 1390.

172. *Id.* at 1316.

173. *Id.* at 1317–18.

the patent when the opposing party seeks to invalidate the patent. For example, having a first method claim that is more tied to a machine and a second method claim that is less tied to a machine may make the opposing party's effort in invalidating both claims more difficult.

VIII. CONCLUSION

In re Bilski only addresses whether method/process claims are statutory subject matter under 35 U.S.C § 101 and does not address other claim types like machine/apparatus claims. In *Bilski*, the Federal Circuit goes back to the Supreme Court's 1981 decision in *Diehr* and holds that a process claim is statutory subject matter only when: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.

In *Bilski*, the Federal Circuit threw out the *Freeman-Walter-Abele* test, the *State Street-AT&T-Alappat* test, and the "technological arts" test. The Federal Circuit also reiterated that (1) insignificant post-solution activity still will not transform an unpatentable principle into a patentable process; (2) the claim must be considered as a whole—and not element-by-element when determining statutory subject matter; (3) the recitation of "new and useful" in 35 U.S.C § 101 is "a general statement of the type of subject matter that is eligible for patent protection" and does not implicate 35 U.S.C § 102 or 35 U.S.C § 103; and (4) mere data gathering is not sufficiently transformative to render a claim statutory subject matter.¹⁷⁴

The machine-or-transformation test may not be wonderful, but it does appear to be workable when properly employed. In that regard, the BPAI must be careful to apply *Bilski* only to method claims and not to claims falling in other statutory categories. Further, when drafting method claims, patent prosecutors should be aware of the requirements under *Bilski* that the method be tied to machine or transformatory.

174. *Bilski*, 545 F.3d at 957–58.

APPENDIX A

Application No	Appeal No	Publication No	Publication Date	Decision Date	Name
10463287	20081213	20030233343A1	12/18/2003	11/06/2008	Ex Parte Li
10439867	20080130	20040230901A1	11/18/2004	11/13/2008	Ex Parte Godwin et al
10326380	20081632	20040133537A1	07/08/2004	11/18/2008	Ex Parte Uceda-Sosa
10158806	20081231	20030154296A1	08/14/2003	11/20/2008	Ex Parte Noguchi et al
09757206	20081588	20020077941A1	06/20/2002	11/24/2008	Ex Parte Halligan et al
10377896	20081344	20030167258A1	09/04/2003	11/26/2008	Ex Parte Koo et al
09780248	20070325	20020013763A1	01/31/2002	01/13/2009	Ex Parte Harris
10328572	20084742	20040122885A1	06/24/2004	01/13/2009	Ex Parte Cornea-Hasegan
10014202	20083000	20030093329A1	05/15/2003	01/14/2009	Ex Parte Gutta
11017450	20074114	20060133206A1	06/22/2006	01/22/2009	Ex Parte Barnes
09948563	20082064	20020072819A1	06/13/2002	01/26/2009	Ex Parte Becker et al
09881873	20090632	20020193092A1	12/19/2002	01/30/2009	Ex Parte Bhogal et al
10126699	20090749	20030198253A1	10/23/2003	01/30/2009	Ex Parte Ahmed
10044468	20086308	20030133160A1	07/17/2003	01/30/2009	Ex Parte Sharma et al
09891341	20084352	20030110021A1	06/12/2003	01/30/2009	Ex Parte Atkin
10669866	20082195	20050065978A1	03/24/2005	02/03/2009	Ex Parte Zybura et al
10261163	20082308	20040054645A1	03/18/2004	02/04/2009	Ex Parte Scholl et al
10112147	20073360	20030188264A1	10/02/2003	02/09/2009	Ex Parte Nawathe et al
09946408	20080773	20020095577A1	07/18/2002	02/18/2009	Ex Parte Nakamura et al
10673848	20082012	20050071387A1	03/31/2005	02/23/2009	Ex Parte Mitchell et al
10430542	20081884	20040225669A1	11/11/2004	02/25/2009	Ex Parte Isaacson et al
10253642	20080024	20030115165A1	06/19/2003	02/26/2009	Ex Parte Hoya
10528731	20090845	20050251344A1	11/10/2005	02/26/2009	Ex Parte Appel et al
10143003	20082753	20050246426A1	11/03/2005	02/27/2009	Ex Parte Motoyama et al
10024482	20082866	20030065589A1	04/03/2003	03/10/2009	Ex Parte Giacchetti
10434939	20082059	20040225922A1	11/11/2004	03/10/2009	Ex Parte Susarla et al