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SYMPOSIUM REVIEW

JUDICIA LLY RE(DE)FINING SOFTWARE PATENT ELIGIBILITY II: A SURVEY OF POST-BILSKI JURISPRUDENCE

Blake Reese†

Abstract

This paper was written for the 2011 Santa Clara Computer and High Technology Law Journal Symposium that took place on January 21, 2011. This paper briefly reviews both of the Federal Circuit’s and Supreme Court’s Bilski decisions and the Federal Circuit’s, district courts’, and ITC’s substantive responses to them that issued by the date of the symposium.

I. INTRODUCTION

When the Federal Circuit Court of Appeals designated the machine-or-transformation test as the sole test for determining whether a process claim is patent eligible, it “recognize[d] that the Supreme Court may ultimately decide to alter or perhaps even set aside [the machine-or-transformation test] to accommodate emerging technologies.” As the appellate court predicted, the United States Supreme Court did grant writ of certiorari to weigh in on the Federal Circuit’s analysis. Awaiting the fate of the machine-or-transformation test and, possibly, the validity of software and business method patents, some district courts delayed their ruling on patent eligibility issues until the Supreme Court spoke. Nonetheless, other district

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1. In re Bilski, 545 F.3d 943, 956 (Fed. Cir. 2008) (en banc).
2. See, e.g., Lincoln Nat’l Life Ins. Co. v. Transamerica Fin. Life Ins. Co., No. 08-135,
courts interpreted and applied the machine-or-transformation test in a manner that called into question the validity of some categories of software and business method patents.  

The Supreme Court ultimately issued its opinion that demoted the machine-or-transformation test from the exclusive test for process patent eligibility to a "useful and important clue" as to whether such claims are "abstract." The Court did not provide any hard rules for determining whether a claim is—or is not—"abstract" but, rather, deferred to the Federal Circuit for crafting such an analysis. Since then, the Federal Circuit, two district courts, and the International Trade Commission ("ITC") have attempted to fashion appropriate patent eligibility rules based on the broad principles present in the Supreme Court's decision.

In light of the machine-or-transformation test's survival, this paper briefly reviews both of the Federal Circuit's and Supreme Court's Bilski decisions and the Federal Circuit's, district courts', and ITC's substantive responses to them.

II. BILSKI IN BRIEF

The claim at issue in In re Bilski was directed to "a method of hedging risk in the field of commodities trading." The claim read as follows:

A method for managing the consumption risk costs of a

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2010 WL 567993, at *1 (N.D. Ind. Feb. 12, 2010) ("[a]fter the Supreme Court issues its Bilski opinion, this Court will likely have clear direction on the precise standard to be applied in evaluating the patentability of method claims. With that guidance, the Court will be able to efficiently consider and evaluate [the accused infringer's] argument that the [patent-at-issue] is invalid.").


5. See id. at 3231.


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

8. Id. at 949.
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 Federal Circuit held that the machine-or-transformation test is the sole analysis to use when determining whether a process qualifies as patentable subject matter. The test requires courts and the United States Patent and Trademark Office (USPTO) to ensure that a process claim either is tied to a “particular” machine or transforms an article into a different state or thing in order to satisfy patent eligibility under 35 U.S.C. § 101. The Federal Circuit’s test also requires that the use of a machine or transformation provide “meaningful limits” on the claim’s scope and not merely involve “insignificant post-solution machine.”

As no “machine” was present in the claim at issue, the court declined to give further guidance on what constitutes a “particular” machine.

The court did, however, explain that “a process for chemical or physical transformation of physical objects or substances is patent-eligible subject matter.” To reach the threshold of an “electronic transformation,” the Federal Circuit noted that

[s]o long as the claimed process is limited to a practical application of a fundamental principle to transform specific data, and the claim is limited to a visual depiction that represents specific physical objects or substances, there is no danger that the scope of the claim

9.  Id.
10. See id. at 961.
11. See id.
12. See id.
13. See id. at 962 (“We leave to future cases the elaboration of the precise contours of machine implementation, as well as the answers to particular questions, such as whether or when recitation of a computer suffices to tie a process claim to a particular machine.”).
14. Id.
would wholly pre-empt all uses of the principle.\textsuperscript{15}

On the other hand, "purported transformations" that only add a data gathering step to an algorithm or that allegedly transform "public or private legal obligations or relationships, business risks, or other such abstractions" will not satisfy the transformation prong of the machine-or-transformation test.\textsuperscript{16} The court stressed that such alleged transformations "cannot meet the test because they are not physical objects or substances, and they are not representative of physical objects or substances."\textsuperscript{17} Nonetheless, the court "decline[d] to adopt a broad exclusion over software or any other such category of subject matter beyond the exclusion of claims drawn to fundamental principles set forth by the Supreme Court."\textsuperscript{18}

The Federal Circuit held the claim at issue invalid for claiming, in whole, non-statutory subject matter because the claim admittedly was not tied to any machine and only purportedly transformed "public or private legal obligations or relationships, business risks, or other such abstractions."\textsuperscript{19}

On certiorari, the Supreme Court affirmed the Federal Circuit's determination that the asserted patent was invalid for lacking statutory subject matter.\textsuperscript{20} In its majority opinion, the Court did not define precisely what claimed subject matter would constitute a patent eligible process under §101.\textsuperscript{21} It noted that the machine-or-transformation test is a "useful and important clue," but "not the sole test for deciding whether" a claimed process is patent eligible.\textsuperscript{22} Rather, it encouraged the Federal Circuit to continue developing "other limiting criteria" for determining whether a claim is—or is not—"abstract."\textsuperscript{23}

The Supreme Court's analysis began by stating that Congress's intent in setting forth the four categories of statutory subject matter—processes, machines, manufactures, and compositions of matter—was to have an "expansive" and "wide scope" of patent eligibility that excludes only certain judicially excepted subject matter, such as "laws

\textsuperscript{15} Id. at 963.
\textsuperscript{16} See id.
\textsuperscript{17} Id.
\textsuperscript{18} Id. at 960 n.23.
\textsuperscript{19} Id. at 963-64.
\textsuperscript{20} See Bilski v. Kappos, 130 S. Ct. 3218, 3218 (2010).
\textsuperscript{21} Id. at 3231.
\textsuperscript{22} Id. at 3226-27.
\textsuperscript{23} Id. at 3231.
of nature, physical phenomena, and abstract ideas."24 The Court cautioned against reading limitations and conditions into the patent laws which the legislature has not expressed.25 It also noted that Congress intended to have business methods protected by the patent laws based on its inclusion of a prior use defense for a party accused of infringing another’s business method patent.26

Relying on its own precedent, the Supreme Court explained that processes may exist that are patent eligible but fail the machine-or-transformation test.27 On the one hand, the Court described its precedent as allowing patent protection for “an application of a law of nature or mathematical formula to a known structure or process;” but, on the other hand, it recognized that a “basic concept . . . reduced to a mathematical formula” and limited “to one field of use or” by “token postsolution components” will not be subject to patent.28

While encouraging the Federal Circuit to continue developing its own precedent on patentable subject matter, the Court warned the Federal Circuit against increasing the scope of patent eligibility too broadly by stating that its opinion should not be read as endorsing interpretations of the Federal Circuit’s expansive approach in State Street Bank & Trust Co. v. Signature Fin. Group, Inc.,29 in which it adopted the “useful, concrete, and tangible result”30 test, and AT&T Corp. v. Excel Commc’ns, Inc.,31 in which it applied that test to method claims.32

III. POST-IN RE BILSKI, PRE-BILSKI V. KAPPOS JURISPRUDENCE

A. Federal Circuit Cases

1. In re Ferguson

The claims at issue in In re Ferguson33 were directed to a

24. Id. at 3225 (quoting Diamond v. Chakrabarty, 447 U.S. 303, 308-09 (1980)) (internal quotations omitted).
25. See id. at 3231.
26. See id. at 3228-29.
27. Id. at 3227 (citing Gottschalk v. Benson, 409 U.S. 63, 71 (1972); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978)).
28. See id. at 3230-31.
30. Id. at 1373.
32. See id. at 1358.
33. In re Ferguson, 558 F.3d 1359 (Fed. Cir. 2009).
The claims read as follows:

[claim 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.

   * * *

[claim 24] 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.  

The Federal Circuit generally agreed with the Board of Patent Appeals and Interferences (BPAI) that the claims at issue were not drawn to statutory subject matter.

Regarding the method claims, the court proclaimed that its "recent decision in Bilski is dispositive" and determined that the method claims failed to satisfy the machine-or-transformation test. The applicants argued that the "shared marketing force" limitation constituted a sufficient tie to a particular machine.  

34. Id. at 1361.
35. Id.
36. See id. at 1366.
37. See id. at 1362.
38. See id.
Nuitjen, the Federal Circuit applied a nineteenth century definition of machine, that is, a "concrete thing, consisting of parts, or of certain devices and combination of devices . . . includ[ing] every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." 39 Using this definition, the court held that "a marketing force is not a machine or apparatus." 40

In addition, the Federal Circuit explained that the claims did not "transform any article into a different state or thing." 41 Specifically, methods of "organizing business or legal relationships in the structuring of a sales force (or marketing company)" do not transform "physical objects or substances" or "representati[ons] of physical objects or substances." 42

Regarding the "paradigm" claims, the court held that they do not fit into any of the four categories of statutory subject matter under § 101: process, machine, article of manufacture, or composition of matter. 43 The court held the claims were: (i) not "directed to processes, as 'no act or series of acts' is required"; (ii) "not a manufacture because . . . [a marketing company] cannot itself be an 'article[] resulting from the process of manufacture'"; (iii) not a "machine" as "you cannot touch the company"; and (iv) "certainly not a composition of matter." 44

2. Prometheus Labs., Inc. v. Mayo Collaborative Servs. I

The claims at issue in Prometheus Labs I 45 were directed to "methods for calibrating the proper dosage of thiopurine drugs, which are used for treating both gastrointestinal and non-gastrointestinal autoimmune diseases." 46 The representative claim reads as follows:

A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:

(a) administering a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and
(b) determining the level of 6-thioguanine in said subject

39. Id. (quoting In re Nuitjen, 500 F.3d 1346, 1355 (Fed. Cir. 2007) (citations omitted)).
40. Id.
41. Id.
42. Id. (citing In re Bilski, 545 F.3d 943, 963 (Fed. Cir. 2008)).
43. See id. at 1365-66.
44. Id. at 1366 (citing In re Nuijten, 500 F.3d 1346, 1355-56 (Fed. Cir. 2007).
46. Id. at 1339.
having said immune-mediated gastrointestinal disorder,

wherein the level of 6-thioguanine less than about 230 pmol per 8x10 red blood cells indicates a need to increase the amount of said drug subsequently administered to said subject and

wherein the level of 6-thioguanine greater than about 400 pmol per 8x10 red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.\textsuperscript{47}

The Federal Circuit "made clear that the patent eligibility of a claim as a whole should not be based on whether selected limitations constitute patent-eligible subject matter."\textsuperscript{48} For determining whether a process is eligible for patenting, the court reaffirmed the machine-or-transformation test as the sole test for such inquiry.\textsuperscript{49}

The court found that the claims are indeed transformative as, "[t]he transformation is of the human body following administration of a drug and the various chemical and physical changes of the drug's metabolites that enable their concentrations to be determined."\textsuperscript{50} Unlike mere "data-gathering steps," "[t]he asserted claims are in effect claims to methods of treatment, which are always transformative when a defined group of drugs is administered to the body to ameliorate the effects of an undesired condition."\textsuperscript{51}

It emphasized that "[t]he invention's purpose to treat the human body is made clear in the specification and the preambles of the asserted claims."\textsuperscript{52} The court noted that the administration of drugs, like the ones embodied in the claims, causes "the human body . . . to undergo[] a transformation."\textsuperscript{53} In addition, the court described the "determining" step as transformative because the levels could not "be determined by mere inspection."\textsuperscript{54} Rather, "[s]ome form of manipulation . . . is necessary to extract the metabolites from a bodily sample and determine their concentration."\textsuperscript{55}

The Federal Circuit focused on whether the transformation was

\textsuperscript{47} Id. at 1340.
\textsuperscript{48} Id. at 1343 (citing In re Bilski, 545 F.3d 943, 958 (Fed. Cir. 2008)).
\textsuperscript{49} See id. at 1342-43.
\textsuperscript{50} Id. at 1346.
\textsuperscript{51} Id.
\textsuperscript{52} Id.
\textsuperscript{53} Id. ("The drugs do not pass through the body untouched without affecting it.").
\textsuperscript{54} Id. at 1347.
\textsuperscript{55} Id.
"central to the purpose of the claims." The court found the transformation had this attribute because "a significant part of the claimed method of treatment" constituted the transformative subject matter. The court further explained that inclusion of mental steps does not "negate the transformative nature of prior steps." Such analysis can be simplified to a single question: "[w]hat did the applicant invent?" In the present case, the court answered, "a series of transformative steps that optimizes efficacy and reduces toxicity of a method of treatment for particular diseases using particular drugs."

The court did not analyze the claims under the machine prong of the test because it found that the claimed methods satisfy the transformation prong. Thus, the claims were drawn to patentable subject matter.

3. *SiRF Tech., Inc. v. ITC*

The claims at issue in *SiRF Tech.* were directed to a "GPS receiver that can calculate its position without having to wait to receive time information from a satellite." The representative claims read as follows:

1. A method for calculating an absolute position of a GPS receiver and an absolute time of reception of satellite signals comprising:
   - providing pseudoranges that estimate the range of the GPS receiver to a plurality of GPS satellites;
   - providing an estimate of an absolute time of reception of a plurality of satellite signals;
   - providing an estimate of a position of the GPS receiver;
   - providing satellite ephemeris data;
   - computing absolute position and absolute time using said pseudoranges by updating said estimate of an absolute time and the estimate of position of the GPS receiver.

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   1. A method, comprising:

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56. *See id.* at 1345.
57. *See id.* at 1347.
58. *Id.* at 1348.
59. *See id.* at 1349 (quoting *In re Gramps*, 888 F.2d 835, 839 (Fed. Cir. 1989)).
60. *Id.*
61. *See id.* at 1346.
63. *Id.* at 1323.
estimating a plurality of states associated with a satellite signal receiver, the plurality of states including a time tag error state, the time tag error state relating a local time associated with said satellite signal receiver and an absolute time associated with signals from a plurality of satellites; and forming a dynamic model relating the plurality of states, the dynamic model operative to compute position of the satellite signal receiver.  

The Federal Circuit applied the machine-or-transformation test to determine whether the method claims at issue were patent eligible. The court focused on the requirement that "the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility." It explained:

In order for the addition of a machine to impose a meaningful limit on the scope of a claim, it must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly, i.e., through the utilization of a computer for performing calculations. We are not dealing with a situation in which there is a method that can be performed without a machine. . . . [T]here is no evidence here that the calculations here can be performed entirely in the human mind. . . . [T]he use of a GPS receiver is essential to the operation of the claimed methods.

Here, the court found that a "GPS receiver is a machine," under the definition of "machine" pursuant to In re Ferguson and In re Nuitjen, that was "integral to each of the claims at issue." For example, "[p]seudoranges, which are the distances or estimated distances between satellites and a GPS receiver, can exist only with respect to a particular GPS receiver that receives the satellite signals." "It is clear that the methods at issue could not be performed without the use of a GPS receiver; indeed without a GPS receiver it would be impossible to generate pseudoranges or to determine the position of the GPS receiver whose position is the

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64. Id. at 1331-32.
65. See id. at 1332.
66. Id. (quoting In re Bilski, 545 F.3d 943, 961 (Fed. Cir. 2008)).
67. Id. at 1333 (emphasis added).
68. See id. at 1332.
69. Id.
precise goal of the claims." Accordingly, the Federal Circuit held the claims at issue were subject to patent.

B. District Court Cases

1. King Pharm., Inc. v. Eon Labs, Inc.

The claims at issue in King Pharm., Inc. were directed to a method of “administering metaxalone to a patient with food.” The claims read as follows:

1. A method of increasing the oral bioavailability of metaxalone to a patient receiving metaxalone therapy comprising administering to the patient a therapeutically effective amount of metaxalone in a pharmaceutical composition with food.

21. The method of claim 1, further comprising informing the patient that the administration of a therapeutically effective amount of metaxalone in a pharmaceutical composition with food results in an increase in the maximal plasma concentration (Cmax) and extent of absorption (AUC(last)) of metaxalone compared to administration without food.

The court did not review independent claim 1 for whether it claimed statutory subject matter, because it found claim 1 unpatentable as anticipated by the prior art. The court did, however, analyze claim 21, which depends from independent claim 1, under Bilski.

In its analysis, the court seemed to imply that, because the limitation of the independent claim was anticipated and the dependent claim wholly contained nonstatutory subject matter, the dependent claim can be invalid under § 101. The court held that dependent claim 21 failed the machine-or-transformation test, as “the act of informing another person of the food effect of metaxalone does not

70. Id.
71. Id. at 1333.
73. Id. at 506.
74. Id.
76. See King Pharm., Inc., 593 F. Supp. 2d at 506-10.
77. See id. at 512-13.
78. See id. at 512 ("Because the food effect is an inherent property of the prior art and, therefore, unpatentable, then informing a patient of that inherent property is likewise unpatentable.").
transform the metaxalone into a different state or thing." The court also noted that the claim's recitation of "a particular transformation...must not constitute mere 'insignificant postsolution activity.'" Accordingly, the court found claim 21 invalid.

2. Fort Props., Inc. v. Am. Master Lease, LLC.

The claims at issue in Fort Props., Inc. were directed to a "method for creating an investment instrument out of real property." The independent claims read as follows:

1. A method of creating a real estate investment instrument adapted for performing tax-deferred exchanges comprising:
   aggregating real property to form a real estate portfolio;
   encumbering the property in the real estate portfolio with a master agreement; and
   creating a plurality of deedshares by dividing title in the real estate portfolio into a plurality of tenant-in-common deeds of at least one predetermined denomination, each of the plurality of deedshares subject to a provision in the master agreement for reaggregating the plurality of tenant-in-common deeds after a specified interval.

11. A method of performing a tax-deferred exchange of investment real estate under §1031 of the Internal Revenue Code comprising:
   transferring a first interest in investment real estate having a first value and being subject to a first debt from an exchanger to a third party;
   using the third party to transfer title to the first interest in investment real estate to a buyer in exchange for money, proceeds of the transfer of the title to the first interest being held by the third party;
   identifying deedshares having a second value equal to or greater than the first value and subject to a second debt equal to or greater than the first debt as a replacement property within a specified number of days of transferring title to the first interest in investment real estate, the deedshares comprising an undivided tenant-in-common interest in investment real estate that is subject

79. Id. at 512-13.
80. Id. at 513 (quoting In re Bilski, 545 F.3d 943, 957 (Fed. Cir. 2008)).
81. Id.
83. Id. at 1053.
to a master agreement including a provision reaggregating title to the investment real estate represented by the deedshares at a specified time;

closing the sale of the deedshares within a second specified number of days of transferring title to the first interest in investment real estate; and

transferring the deedshares and the second debt from the third party to the exchanger.

* * *

22. A method of creating a real estate investment instrument adapted for performing tax-deferred exchanges comprising:

acquiring real property;

encumbering the real property with a master agreement; and

creating a plurality of deedshares by dividing title in the real property into a plurality of tenant-in-common deeds of at least one predetermined denomination, each of the plurality of deedshares subject to a provision for reaggregating the plurality of tenant-in-common deeds after a specified interval.

* * *

32. A method of creating a real estate investment instrument adapted for performing tax-deferred exchanges comprising:

acquiring real property;

encumbering the real property with a master agreement; and

using a computer to generate a plurality of deedshares by generating a plurality of tenant-in-common deeds of at least one predetermined denomination that divide title in the real property into a plurality of tenant-in-common interests, each of the plurality of tenant-in-common deeds being subject to a provision in the master agreement for reaggregating the plurality of tenant-in-common deeds after a specified interval.84

The court applied the machine-or-transformation test to the claims at issue.85 For process claims, the court explained that the


85. See Fort Props., Inc., 609 F. Supp. 2d at 1055-56. In its analysis, the court noted that the initial patent examiner rejected the claims at issue for failing to be “in the technological arts”; however, that examiner “apparently left the U.S. Patent Office, and the application was assigned to another patent examiner . . . who ultimately allowed the claims.” Id. at 1055 (citation omitted). Although the notice of allowance did not mention patent eligibility issues, a summary of an examiner interview echoed the applicant’s assertion that the claims were eligible under the “useful, concrete, and tangible result” test. Id. (citation omitted). Thus, the court found that the examiner’s “decision to allow the claims relied in large part on the ‘useful, concrete, and
patentee must show that the "claim is tied to a particular machine" or "transforms an article."\textsuperscript{86} Furthermore, "two considerations were important to [this] analysis."\textsuperscript{87} "First, 'the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility.' Second, 'the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity.'"\textsuperscript{88}

For the machine prong, the patentee "acknowledged during" prosecution and in its opposition brief that "the recited methods need not be performed by a computer."\textsuperscript{89}

For the transformation prong, the court found that, like in \textit{Bilski}, the claims at issue "involve only the transformation or manipulation of legal obligations and relationships."\textsuperscript{90} In particular, those claims "only transform or manipulate legal ownership interests in real estate" and, therefore, "under \textit{Bilski}, the [c]ourt [could not] find that those claims transform an article or thing."\textsuperscript{91} The court rejected the patentee's argument that "the creation of the deedshare certainly qualifies as the 'transformation and reduction of an article,'" as deedshares do not "represent physical objects or substances."\textsuperscript{92} As a result, the court held the claims at issue invalid under \textit{Bilski}.\textsuperscript{93}

3. \textit{CyberSource Corp. v. Retail Decisions, Inc.}

The claims at issue in \textit{CyberSource Corp.}\textsuperscript{94} were directed to "a method and system for detecting fraud in a credit card transaction between a consumer and a merchant over the internet."\textsuperscript{95} The claims read as follows:

2. A computer readable medium containing program instructions for detecting fraud in a credit card transaction between a consumer and a merchant over the Internet, wherein execution of the program instructions by one or more processors of a computer system causes the one or more processors to carry out the steps of:

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\textsuperscript{86} \textit{Id}. at 1055 (quoting \textit{In re Bilski}, 545 F.3d 943, 961 (Fed. Cir. 2008)).
\textsuperscript{87} \textit{Id}.
\textsuperscript{88} \textit{Id}. (quoting \textit{Bilski}, 545 F.3d at 961-62) (citations omitted).
\textsuperscript{89} \textit{Id}. at 1055-56 (citation omitted).
\textsuperscript{90} \textit{Id}. at 1056.
\textsuperscript{91} \textit{Id}.
\textsuperscript{92} \textit{See id}. (citing \textit{Bilski}, 545 F.3d at 963) (citations omitted).
\textsuperscript{93} \textit{See id}.
\textsuperscript{94} \textit{CyberSource Corp. v. Retail Decisions, Inc.}, 620 F. Supp. 2d 1068 (N.D. Cal. 2009).
\textsuperscript{95} \textit{Id}. at 1070.
a) obtaining credit card information relating to transactions from the consumer; and
b) verifying the credit card information based upon values of plurality of parameters, in combination with information that identifies the consumer, and that may provide an indication whether the credit card transaction is fraudulent,
wherein each value among the plurality of parameters is weighted in the verifying step according to an importance, as determined by the merchant, of that value to the credit card transaction, so as to provide the merchant with a quantifiable indication of whether the credit card transaction is fraudulent,
wherein execution of the program instructions by one or more processors of a computer system causes the one or more processors to carry out the further steps of;
obtaining information about other transactions that have utilized an Internet address that is identified with the credit card transaction;
constructing a map of credit card numbers based upon the other transactions; and utilizing the map of credit card numbers to determine if the credit card transaction is valid.

3. A method for verifying the validity of a credit card transaction over the Internet comprising the steps of:
a) obtaining information about other transactions that have utilized an Internet address that is identified with the credit card transaction;
b) constructing a map of credit card numbers based upon the other transactions and;
c) utilizing the map of credit card numbers to determine if the credit card transaction is valid.96

Claim 3, inter alia, was a method performed “over the Internet” and, claim 2 was a Beauregard-type97 claim.98 The court applied the Bilski machine-or-transformation test to both claims.99

For the method claim, the court explained in its “machine”

96. Id. at 1071.
97. Beauregard-type claims are typically drafted to include a computer readable storage medium containing program instructions, where execution of those instructions causes one or more processors to perform a method. See In re Beauregard, 53 F.3d 1583, 1584 (Fed. Cir. 1995).
99. See id. at 1073-81 (“Like claim 3, claim 2 is subject to the machine-or-transformation test for patent eligibility.”).
inquiry that "[t]he Bilski court specifically left it to future cases to determine 'whether or when recitation of a computer suffices to tie a process claim to a particular machine.'" 100 The court found that performing the method "over the Internet" was not a tie to a particular machine because "the internet is an abstraction ... as one can touch a computer or a network cable, but one cannot touch 'the internet.'" 101 The court enhanced its reasoning by explaining that, under Bilski, "the use of the internet does not impose meaningful limits on the scope of the claims." 102 Similarly, the court noted that otherwise unpatentable subject matter "does not become patentable by tossing in references to internet commerce." 103

In its "transformation" analysis of the method claim, the court ruled that collecting data into a "map" (a data structure) was not an adequate "transformation" of an "article," because an article is "any physical object or substance, or an electronic signal representative of any physical object or substance." 104 The court stated that a mere "manipulation" of data (manipulating credit card numbers to create a data structure) did not satisfy the threshold of a "transformation." 105 Relying on Bilski, the court explained that even if the steps constituted a transformation, a credit card number is not—and does not represent—a physical object or substance. 106 The court further searched for a "visual depiction" as "required by the Bilski" opinion, but did not find such limitations in the claims. 107 Nonetheless, the court noted that "[e]ven if the . . . process visually depicted a credit card, and even if this step otherwise met the transformation prong, it would have no utility." 108 Without resolving it, the court also framed "the legal question of whether the step purportedly meeting the transformation prong must, to do so, contribute to the claimed process's usefulness." 109

For the Beauregard-type claim, the court also ruled it did not

100. Id. at 1076 (emphasis added) (quoting In re Bilski, 545 F.3d 943, 962 (Fed. Cir. 2008)).
101. Id. at 1077 (citing In re Ferguson, 558 F.3d 1359, 1366 (Fed. Cir. 2009)).
102. Id. (citing Bilski, 545 F.3d at 961).
103. Id.
104. Id. at 1073-74 (citing Bilski, 545 F.3d at 964).
105. See id.
106. See id. at 1074-75.
107. See id. at 1076 (citing Bilski, 545 F.3d at 963).
108. Id. at 1076 n.7.
109. Id.
transform articles. The court further noted that the specification failed to describe the processors or a computer.

In its analysis, the court explained that In re Beauregard, was not a decision on the merits of patentability. Moreover, In re Alappat was "abrogated by Bilski" because it did not employ the machine-or-transformation test. The court found recent decisions of the BPAI persuasive: "following Bilski, the Board has rightly held that simply appending 'A computer readable media, including program instructions . . .' to an otherwise non-statutory process claim, is insufficient to make it statutory.

The court concluded its analysis with an interesting statement regarding so-called business method patents: "Bilski's holding suggests a perilous future for most business method patents. . . . The closing bell may be ringing for business method patents, and their patentees may find they have become bagholders.


The claims at issue in Versata Software, Inc. were "directed to a computer-based configuration system." Representative independent claims at issue read as follows:

1. A method of configuring a system in a computer system comprising the steps of:
   defining a structural model hierarchy comprised of composite and container hierarchies and port relationships substructures;
   instantiating in said computer system a configuration instance;

   See id. at 1080.
   See id. at 1076-78.
   See id. at 1076 ("[T]he written description includes nary a detail about the 'one or more processors' recited by claim 2.").
   In re Beauregard, 53 F.3d 1583 (Fed. Cir. 1995).
   Cybersource, 620 F. Supp. 2d at 1079.
   In re Alappat, 33 F.3d 1526 (Fed. Cir. 1994).
   Cybersource, 620 F. Supp. 2d at 1080 (citing In re Biiski, 545 F.3d 943, 959 (Fed. Cir. 2008)).
   Id. (quoting Ex parte Cornea-Hasegan, 89 U.S.P.Q.2d 1557, 1561 (B.P.A.I. 2009)).
   Id. at 1081.
   Id. at *1.
modifying said configuration instance in response to a request by creating in said configuration instance instances of one or more model elements based on said request;

storing said modifications in a list of modifications;

examining said instances to determine if a constraint exists;

satisfying in said computer said constraint when said constraint exists;

satisfying in said computer a component constraint of said component hierarchy when said instances are constrained by said component constraints;

satisfying in said computer container constraints of said container hierarchy when said instances are constrained by said container constraints;

satisfying in said computer connection constraints of said port relationship when said instances are constrained by said connection constraints;

committing said modifications to said configuration instance and removing said modifications from said modifications list when no constraint exists and when all constraints associated with said instances are satisfied; and

removing said modifications from said configuration instance and said modifications list when any constraint associated with said instances is not satisfied.

* * *

2. A method of configuring a system in a computer system comprising the steps of:

defining a structural model hierarchy comprised of composite and container hierarchies and port relationships substructures;

instantiating in said computer system a configuration instance;

(a) modifying said configuration instance in response to a request by creating in said configuration instance instances of one or more model elements based on said request;

(b) storing said modifications in a list of modifications;

(c) examining said instances to determine if a constraint exists;

(d) satisfying in said computer said constraint when said constraint exists;

(e) committing said modifications to said configuration instance and removing said modifications from said modifications list when no constraint exists and when said constraint is satisfied; and
(f) removing said modifications from said configuration instance and said modifications list when said constraint is not satisfied.\textsuperscript{121}

\* \* \*

30. A configuration apparatus comprising:

a central processing unit (CPU);

a modeling system coupled to said CPU, said modeling system configured to define a model having information about elements available for inclusion in a system configuration;

a configurator coupled to said CPU, said configurator configured to select a plurality of said elements of said model for inclusion in said system configuration in response to configuration requests.

\* \* \*

40. In a computer system, a method of generating a configuration for a system comprising the steps of:

defining an element model consisting of elements used to configure said system and structural relationships between said elements in said model;

creating a plurality of components of said system that are instances of one or more elements of said model in response to configuration requests;

identifying one or more of said plurality of components that can satisfy constraints of said plurality of components;

creating a second plurality of components to satisfy constraints if said constraints cannot be satisfied by said one or more of said plurality of components.

\* \* \*

41. An article of manufacturing comprising:

a computer usable medium having computer readable program code embodied therein for generating a configuration for a system, said system configuration specifying a plurality of components that comprise said system comprising:

computer readable program code configured to cause a computer to define a model that includes a definition for each of a plurality of components selectable for inclusion in said system configuration and constraints on said plurality of components,

computer readable program code configured to cause a computer to receive a configuration request;

\textsuperscript{121}. U.S. Patent No. 5,515,524 (filed Mar. 29, 1993).
computer readable program code configured to cause a computer
to create an instance of a component in said system configuration
in response to said configuration request;

computer readable program code configured to cause a computer
to satisfy a plurality of constraints of said component. 122

The court in Versata Software, Inc. provided insight into its
interpretation of Bilski in response to the accused infringer’s motion
for judgment on the pleadings. 123 The accused infringer contended
that the Bilski decision invalidated the claims at issue. 124 Specifically,
the accused infringer argued that “the claimed methods do not satisfy
the ‘machine’ portion of the test because they can be performed
entirely within the human mind, or using pencil and paper.” 125 The
accused infringer further argued that “the claimed methods do not
satisfy the ‘transformation’ portion of the test because they do not
transform any article into a different state or thing.” 126

The court rejected these arguments based on its “interpretation of
Bilski” not being “so broad as” the accused infringer’s. 127 The court
explained that the Federal Circuit

decline[d] to adopt a broad exclusion over software or any other
such category of subject matter beyond the exclusion of claims
drawn to fundamental principles . . . [and noted] the process claim
at issue in the appeal is not, in any event, a software claim. Thus,
the facts here would be largely unhelpful in illuminating the
distinctions between those software claims that are patent-eligible
and those that are not. 128

Accordingly, the court denied the motion. 129

5. Every Penny Counts, Inc. v. Bank of Am. Corp.

The claim at issue in Every Penny Counts, Inc. 130 was directed to
“a system whereby consumers can save and/or donate a portion of a

124. See id.
125. Id.
126. Id.
127. Id.
128. Id. (quoting Bilski, 545 F.3d at 960 n.23 (citation omitted)).
129. Id.
130. Every Penny Counts, Inc. v. Bank of America Corp., No. 07-042, 2009 WL 6853402
(M.D. Fla. May 27, 2009).
credit or debit transaction." The claim read as follows:

A system, comprising:

A network;

entry means coupled to said network for entering into the network an amount being paid in a transaction by a payor;

identification entering means in said entry means and coupled to said network for entering an identification of the payor;

said network including computing means having data concerning the payor including an excess determinant established by the payor for the accounts;

said computing means in said network being responsive to said data and said identification entering means for determining an excess payment on the basis of the determinant established by the payor, and

said computing means in said network being responsive to the excess payment for apportioning, at least a part of the excess payment amount said accounts on the basis of the excess determined and established by the payor and on the basis of commands established by the payor and controlled by other than the payee.

The accused infringer in Every Penny Counts, Inc. moved for summary judgment of invalidity based on the Federal Circuit’s Bilski decision. Previously, the District Court construed “computing means” as “the bank or card issuing institution’s central computer, with a keypad and display, that is programmed to carry out the algorithm disclosed in” the patent’s figures.

While the claim was drafted as a system claim with structural elements, the court applied Bilski’s machine-or-transformation test to analyze whether the claim was drawn to sufficient statutory subject matter. The court explained that “[t]he ‘system’ described by [the patent at issue] ‘has no substantial practical application except in connection with’ computers, cash registers, and networks, but it is not comprised of those devices. The [patent at issue] is a process, not a

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131. *Id.* at *1.*
132. *Id.*
133. *Id.*
In its “machine” analysis, the court found that the alleged ties to machines were merely “insignificant extra-solution activity.” In particular, the claimed “process” includes “a mathematical algorithm [that] uses machines for data input and data output and to perform the required calculations.” But, “those machines do not . . . impose any limit on the process itself.”

The patentee did not contend that claim at issue was transformative. As a result, the court held the claim at issue invalid under Bilski.

6. DealerTrack, Inc. v. Huber

The claims at issue in DealerTrack, Inc. were directed to a “computer aided method of managing [a] credit application[.]” The independent claim at issue read as follows:

1. A computer aided method of managing a credit application, the method comprising the steps of:
   - receiving credit application data from a remote application entry and display device;
   - selectively forwarding the credit application data to remote funding source terminal devices;
   - forwarding funding decision data from at least one of the remote funding source terminal devices to the remote application entry and display device;
   - wherein the selectively forwarding the credit application data step further comprises:
     - sending at least a portion of a credit application to more than one of said remote funding sources substantially at the same time;
     - sending at least a portion of a credit application to more than one of said remote funding sources sequentially until a finding source returns a positive funding decision;
     - sending at least a portion of a credit application to a first one of said remote funding sources, and then, after a predetermined time,

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136. Id. at *2.
137. See id. at *3.
138. Id.
139. Id.
140. See id.
141. See id.
143. See id. at 1152.
sending to at least one other remote funding source, until one of the finding sources returns a positive funding decision or until all funding sources have been exhausted; or;

sending the credit application from a first remote funding source to a second remote finding source if the first funding source declines to approve the credit application.\(^\text{144}\)

The accused infringers in \textit{DealerTrack, Inc.} moved for summary judgment of invalidity of the claims at issue under \textit{Bilski}.\(^\text{145}\) The patentee argued each of the following structures established a tie to a particular machine under \textit{Bilski}: (i) “remote application entry and display device” and (ii) “remote funding source terminal device.”\(^\text{146}\) Respectively, the court construed those terms as (i) “any device, e.g., personal computer or dumb terminal, remote from the central processor, for application entry and display”; and (ii) “any device, e.g., personal computer or dumb terminal, located at a logical or physical terminus of the system.”\(^\text{147}\)

The court relied on \textit{In re Alappat} for the notion that “a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.”\(^\text{148}\) Nevertheless, based on its analysis, in part, of \textit{CyberSource, Inc.} and a string of BPAI cases, the court found that each of the structures construed above were not a “particular machine” pursuant to \textit{Bilski}.\(^\text{149}\) The court noted that the patent “does not specify precisely how the computer hardware and database are ‘specially programmed,’ and the claimed central processor is nothing more than a general purpose computer that has been programmed in some unspecified manner.”\(^\text{150}\)

The patentee conceded that the claims at issue were not transformative.\(^\text{151}\) Accordingly, the court held the claims at issue invalid under \textit{Bilski}.\(^\text{152}\)

\begin{footnotes}
\item[145] \textit{See DealerTrack}, 657 F. Supp. 2d at 1153.
\item[146] \textit{Id.} at 1155-56.
\item[147] \textit{Id.} at 1156.
\item[148] \textit{Id.} at 1155 (quoting \textit{In re Alappat}, 33 F.3d 1526, 1545 (Fed. Cir. 1994)).
\item[150] \textit{Dealertrack}, 657 F. Supp. 2d at 1156.
\item[151] \textit{See id.} at 1154.
\item[152] \textit{See id.} at 1156.
\end{footnotes}

The claims in *Research Corp. Techs., Inc.* 153 “relate to image halftoning technology used in computers and printers.” 154 The representative claims at issue, as construed by the court, read as follows:

(1) A method for the halftoning [the simulation of a continuous tone image, such as a shaded drawing or photograph, with groups or cells of color or black dots. The dots are placed in such a way that they appear to the human eye to be a single color] of gray scale images [collection of numerical gray scale values, as stored in a computer, for the gray tone pixel measurements of an image] by utilizing a pixel-by-pixel comparison [a threshold operation in which a single pixel gray scale value, derived from the continuous tone image, will be compared to a single pixel of a mask to determine whether a dot is turned on at the corresponding pixel location in the resultant halftone image] of the image against a blue noise mask [a halftone mask with wraparound properties that produces blue noise and visually pleasing dot profiles at any level of gray] in which the blue noise mask is comprised of a random non-deterministic [an entity, such as a quantity, event, or thing (e.g., a number, or a position of a dot) that is not predictable in outcome, i.e., there is no fixed or known or determinable rule that, by observation of the previous examples of the entity alone, allows the prediction of any future example of the entity], non-white noise [all of the power spectrum values are not approximately equal] single valued function [a halftone mask is a single value function when every position of the mask has one and only one threshold value] which is designed to produce [acting with deliberated or explicit intent to create or deliver a desired outcome] visually pleasing [a dot profile is visually pleasing if it possesses the collection of properties that must include: (1) aperiodicity; (2) isotropy (low anisotropy); and (3) lack of low-frequency graininess] dot profiles [the binary dot pattern resulting from performing a halftoning operation at a constant gray level] when thresholded [the result of comparing an operand against a fixed threshold and setting an operand less than the threshold to one value and an operand greater than or equal to the threshold to another value] at any level of said gray scale images [collection of numerical gray scale values, as stored in a computer, for the gray tone pixel measurements of an image].

154. See id. at 1106-1108.
(2) The method of claim 1, wherein said blue noise mask is used to halftone a color image.

(11) A method for the halftoning [the simulation of a continuous tone image, such as a shaded drawing or photograph, with groups or cells of color or black dots. The dots are placed in such a way that they appear to the human eye to be a single color] of color images [an image that is formed and captured in more than one wavelength of light], comprising the steps of utilizing, in turn, a pixel-by-pixel comparison [a threshold operation in which a single pixel gray scale value, derived from the continuous tone image, will be compared to a single pixel of a mask to determine whether a dot is turned on at the corresponding pixel location in the resultant halftone image] of each of a plurality of color planes [the decomposition of a color image into separate primary color components, called planes, for each member of a set of primary colors] of said color image against a blue noise mask [a halftone mask with wraparound properties that produces blue noise and visually pleasing dot profiles at any level of gray] in which the blue noise mask is comprised of a random non-deterministic [an entity, such as a quantity, event, or thing (e.g., a number, or a position of a dot) that is not predictable in outcome, i.e., there is no fixed or known or determinable rule that, by observation of the previous examples of the entity alone, allows the prediction of any future example of the entity], non-white noise [all of the power spectrum values are not approximately equal] single valued function [a halftone mask is a single value function when every position of the mask has one and only one threshold value] which is designed to provide visually pleasing [a dot profile is visually pleasing if it possesses the collection of properties that must include: (1) aperiodicity; (2) isotropy (low anisotropy); and (3) lack of low-frequency graininess] dot profiles [the binary dot pattern resulting from performing a halftoning operation at a constant gray level] when thresholded [the result of comparing an operand against a fixed threshold and setting an operand less than the threshold to one value and an operand greater than or equal to the threshold to another value] at any level of said color images, wherein a plurality of blue noise masks are separately utilized to perform said pixel-by-pixel comparison and in which at least one of said blue noise masks is independent and uncorrelated [dot profiles are generated by random processes that possess no statistical dependence and no statistical correlation] with the other blue noise masks.

* * *

(1) A method for the halftoning [the simulation of a continuous
tone image, such as a shaded drawing or photograph, with groups or cells of color or black dots. The dots are placed in such a way that they appear to the human eye to be a single color of color images [an image that is formed and captured in more than one wavelength of light] which comprises the step of utilizing, in turn, a pixel-by-pixel comparison [a threshold operation in which a single pixel gray scale value, derived from the continuous tone image, will be compared to a single pixel of a mask to determine whether a dot is turned on at the corresponding pixel location in the resultant halftone image] of each of a plurality of color planes [the decomposition of a color image into separate primary color components, called planes, for each member of a set of primary colors] of said color image against a mask [an ordering of a set of values in a regular format in a two-dimensional structure of rows and columns that is used for halftoning an image by comparison of image pixels against corresponding mask pixels] in which the mask comprises a non-determinate [the meaning is synonymous with unpredictable, or lacking the ability to be predicted] non-white noise [all of the power spectrum values are not approximately equal] single valued function [a halftone mask is a single value function when every position of the mask has one and only one threshold value] which is designed to provide visually pleasing [a dot profile is visually pleasing if it possesses the collection of properties that must include: (1) aperiodicity; (2) isotropy (low anisotropy); and (3) lack of low-frequency graininess] dot profiles [the binary dot pattern resulting from performing a halftoning operation at a constant gray level] when thresholded [the result of comparing an operand against a fixed threshold and setting an operand less than the threshold to one value and an operand greater than or equal to the threshold to another value] and wherein said step of utilizing said pixel-by-pixel comparison is used to produce a halftoned image.

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(11) A method for the halftoning of color images which comprises the step of utilizing, in turn, a pixel-by-pixel comparison of each of a plurality of color planes of said color image against a respective one of a plurality of masks in which each respective mask comprises a non-deterministic, non-white noise single valued function which is designed to provide visually pleasing dot profiles when thresholded and wherein said step of utilizing said pixel-by-pixel comparison is used to produce a halftoned image.

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(2) A method for halftoning [the simulation of a continuous tone image, such as a shaded drawing or photograph, with groups or
cells of color or black dots. The dots are placed in such a way that they appear to the human eye to be a single color] image information [any information obtained from a continuous tone image] which comprises the step of comparing [the function performed by a comparator: a device, (or collection of operations, as in software) that compares an input number (called the operand) to a number prestored in the comparator (called the threshold) and produces as output a binary value (such as “0,” zero) if the input is algebraically less than the threshold, and produces the opposite binary value (such as “1,” one) if the input is algebraically greater than or equal to the threshold] such information against at least one array [an ordering of a set of quantities, such as numbers, in a regular format, e.g., the ordering of numbers in a two-dimensional structure of rows and columns], wherein said at least one array is comprised of multibit threshold values [values used in threshold operations that possess multiple bits of significance], and said at least one array, when thresholded [the result of comparing an operand against a fixed threshold and setting an operand less than the threshold to one value and an operand greater than or equal to the threshold to another value], produces a dot pattern according to a substantially blue noise power spectrum [a power spectrum which has small or negligible low frequency in the low frequency region adjacent the ordinate of the frequency plot; a transition region from the low frequency region; and a high frequency region which has an absence of strong or dominate spikes sensed as artifacts in the spatial domain] and wherein said step of comparing is used to produce a halftoned image.

(6) A method for halftoning of an image which comprises the step of comparing information derived from said image [any information obtained from a continuous tone image] against at least one array, wherein said at least one array, when thresholded, produces a pattern that exhibits a power spectrum substantially characteristic of a blue noise power spectrum and wherein said step of comparing is used to produce a halftoned image.

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(29) Apparatus for the halftoning [the simulation of a continuous tone image, such as a shaded drawing or photograph, with groups or cells of color or black dots. The dots are placed in such a way that they appear to the human eye to be a single color] of color images [an image that is formed and captured in more than one wavelength of light] comprising a comparator [a device, (or collection of operations, as in software) that compares an input number (called the operand) to a number prestored in the comparator (called the threshold) and produces as output a binary
value (such as "0," zero) if the input is algebraically less than the threshold, and produces the opposite binary value (such as "1," one) if the input is algebraically greater than or equal to the threshold] for comparing [the function performed by a comparator], on a pixel-by-pixel basis [a threshold operation in which a single pixel gray scale value, derived from the continuous tone image, will be compared to a single pixel of a mask to determine whether a dot is turned on at the corresponding pixel location in the resultant halftone image], a plurality of color planes [the decomposition of a color image into separate primary color components, called planes, for each member of a set of primary colors] of said color image against a blue noise mask [a halftone mask with wraparound properties that produces blue noise and visually pleasing dot profiles at any level of gray] in which the blue noise mask is comprised of random non-deterministic [an entity, such as a quantity, event, or thing (e.g., a number, or a position of a dot) that is not predictable in outcome, i.e., there is no fixed or known or determinable rule that, by observation of the previous examples of the entity alone, allows the prediction of any future example of the entity], non-white noise [all of the power spectrum values are not approximately equal] single valued function [a halftone mask is a single value function when every position of the mask has one and only one threshold value] which is designed to provide visually pleasing [a dot profile is visually pleasing if it possesses the collection of properties that must include: (1) aperiodicity; (2) isotropy (low anisotropy); and (3) lack of low-frequency graininess] dot profiles [the binary dot pattern resulting from performing a halftoning operation at a constant gray level] when thresholded [the result of comparing an operand against a fixed threshold and setting an operand less than the threshold to one value and an operand greater than or equal to the threshold to another value] at any level of said color images, wherein an output of said comparator is used to produce a halftoned image.

(42) An apparatus for halftoning image information [any information obtained from a continuous tone image], comprising a comparator for comparing such information against at least one array [an ordering of a set of quantities, such as numbers, in a regular format, e.g., the ordering of numbers in a two-dimensional structure of rows and columns], where said at least one array is comprised of multibit threshold values [values used in threshold operations that possess multiple bits of significance], and said at least one array, when thresholded, produces a dot pattern according to a substantially blue noise power spectrum [a power spectrum which has small or negligible low frequency in the low frequency
region adjacent the ordinate of the frequency plot; a transition region from the low frequency region; and a high frequency region which has an absence of strong or dominate spikes sensed as artifacts in the spatial domain] and wherein an output of said comparator is used to produce a halftoned image.

(72) An apparatus for halftoning a color image, comprising a comparator for comparing information derived from at least one component color of such image against at least one array, wherein said at least one array, when thresholded, exhibits a power spectrum substantially characteristic of a blue noise power spectrum and wherein an output of said comparator is used to produce a halftoned image.\(^{155}\)

The court explained that the machine-or-transformation test “determin[es] 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.’”\(^{156}\) It added that “[t]he machine-or-transformation test solves the issue of inappropriate preemption.”\(^{157}\) The court noted that the machine-or-transformation test accomplishes this result, in part, based on “two corollaries”: (1) “post-solution and [(2)] field-in-use limitations are insufficient to make a claim to a fundamental principle process patent eligible.”\(^{158}\) It cited prior precedent for what may constitute “postsolution activities:” “a simple recordation step in the middle of the claimed process”,\(^{159}\) and “a presolution step of gathering data.”\(^{160}\)

The court interpreted the Federal Circuit’s discussion of In re Abele in Bilski as providing two requirements for a claimed process to be transformative: “it should be (1) limited to transformation of specific data, and (2) limited to a visual depiction representing specific objects or substances.”\(^{161}\)

Based on its interpretation of Bilski, the court analyzed the representative claims at issue under the machine-or-transformation test.\(^{162}\) It found that all the claims at issue failed the “machine” prong of the test, as the claims “state[d] that no particular machine is


\(^{156}\) Id. at 1109 (quoting In re Bilski, 545 F.3d 942, 954 (Fed. Cir. 2008)).

\(^{157}\) Id. at 1110 (quoting Bilski, 545 F.3d at 957).

\(^{158}\) See id.

\(^{159}\) See id. (citing In re Schrader, 22 F.3d 290, 294 (Fed. Cir. 1994)).

\(^{160}\) See id. (citing In re Grams, 888 F.2d 835, 839-40 (Fed. Cir. 1989)).

\(^{161}\) See id. at 1111.

\(^{162}\) See id. at 1112-1118.
required for [the claimed] algorithm."\textsuperscript{163} Notably, the court explained that its interpretation of "comparator"—"[a] device (or collection of operations, as in software)"—could include software per se and, therefore, a "comparator" was not a "particular" machine.\textsuperscript{164} In other words, the court expressed that "the potential for use on a machine is not the equivalent of being tied to a machine."\textsuperscript{165} Moreover, "the term 'device' is not synonymous with machine."\textsuperscript{166}

In its transformation analysis, the court found that the claims at issue which recite "the production of an image as a result of the comparison numbers" are transformative.\textsuperscript{167} Specifically, "the comparison between the halftoned color images and each of the color planes against a mask which is designed to produce visually pleasing dot profiles to finally produce a halftoned image" or "the comparison of a halftoned image against an array, or an ordering of numbers, and that the array produces a pattern when it undergoes another comparison through thresholding, and that the step of comparing those numbers produces a halftoned image" claim "a transformation of specific data" that "is further limited to a visual depiction which represents specific objects."\textsuperscript{168} In addition, the court found that even the "recitation of the production of an image as a result of the comparison of numbers" rose to the level of performing a "transformation."\textsuperscript{169} However, the claims at issue that merely "assembl[ed]...gray scale images to generate final dot profiles" were not transformative because they did not "mandate a further visual display or image."\textsuperscript{170}

As a result, the court invalidated the claims under \textit{Bilski} that were both not transformative and not tied to a particular machine.\textsuperscript{171}

8. \textit{Abstrax, Inc. v. Dell, Inc.}

The claims at issue in \textit{Abstrax, Inc.}\textsuperscript{172} were "directed to a method for assembling a product having components wherein the variable portions of a set of abstract assembly steps are resolved in accordance

\begin{itemize}
\item 163. \textit{Id.} at 1114.
\item 164. \textit{See id.} at 1118 (citation omitted).
\item 165. \textit{Id.}
\item 166. \textit{Id.}
\item 167. \textit{Id.} at 1116.
\item 168. \textit{Id.}
\item 169. \textit{Id.}
\item 170. \textit{Id.} at 1112.
\item 171. \textit{See id.} at 1118.
\end{itemize}
with data from a desired configuration." Representative claim 10 read as follows:

10. A method, performed by a computer, for assembling a product having components, the method comprising the steps of:

(a) providing one or more abstract assembly steps for assembling the product, the abstract assembly steps containing variable portions for assembling the product with potentially different configurations, the variable portions including variable parameters capable of representing different component information;

(b) obtaining a configuration model corresponding to a requested configuration of the product, the configuration model including one or more of the component information lines corresponding to one or more components utilized in the requested configuration; and

(c) applying the configuration model to the abstract assembly steps provided for assembling the product by inserting component information from the component information lines into the variable parameters of the variable portions of the abstract assembly steps to produce one or more assembly instructions for assembling the product to have the requested configuration.

The court in Abstrax, Inc. reviewed the claim under the machine-or-transformation test. In its transformation analysis, the court explained that the issue is "what sorts of things constitute 'articles' such that their transformation is sufficient to impart patent-eligibility under § 101." Furthermore, it noted that "today's 'articles' are often electronic signals and electronically manipulated data." Rejecting the accused infringer's argument that the data at issue was too broadly claimed, the court expressed that "[t]he rejected claim in Abele 'did not specify any particular type or nature of data; nor did it specify how or from where the data was obtained or what the data represented.'" It held that the data in claim 10 "represents physical and tangible objects and their respective structures" because it concerns "how parts, pieces, or components of a product fit together

173. Id. at *2.
174. Id. at *2-3. The author notes the irony of a software patent holder both using the claim limitation "abstract" and having a trade name including "Abstrax."
175. See id. at *2-4.
176. Id. at *3 (quoting In re Bilski, 545 F.3d 943, 962 (Fed. Cir. 2008)).
177. Id. at *3.
178. Id. (quoting Bilski, 545 F.3d at 962).
and how they are configured.” Additionally, “the claims indicate that the data is obtained from the component information lines in the configuration model.”

The court also rejected the accused infringer’s argument that the claim did not contain a sufficient “visual depiction.” “Here, the raw data is transformed into assembly instructions for assembling the product to have the requested configuration.” Notably, the court mentioned that “transformation of ‘configuration model’ data impose[d] meaningful limits on the claim’s scope” because both parties proposed the term “configuration model” for claim construction.

As a result, the court found the claims at issue satisfied Bilski.


The claims in *Fuzzysharp Techs. Inc.* were directed to “mathematical algorithms that can be used to reduce the number of calculations required to determine whether a 3D surface is visible or invisible on a display screen.” The representative claims at issue, as construed by the court, read as follows:

1. A method of reducing the visibility related computations in 3-D computer graphics, the visibility related computations being performed on 3-D surfaces or their sub-elements, or a selected set of both, the method comprising:
   
   [a] identifying grid cells which are under or related to the projections or extents of projections associated with at least one of said 3-D surfaces or their sub-elements;
   
   [b] comparing data associated with said at least one of 3-D surfaces or their sub-elements with stored data associated with the grid cells;
   
   [c] determining which of said at least one of 3-D surfaces or their subelements is always invisible or always visible to a viewpoint or a group of viewpoints by projection based computations prior to a

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179. Id.
180. Id.
181. See id. at *4.
182. Id.
183. Id. ("Ostensibly, a claim term that both parties feel warrants construction would impose limits on a claim and would not be merely extra-solution activity.").
184. See id.
186. Id. at *1.
visibility computations; and

[D] ignoring said determined at least one of the 3-D surfaces or their subelements during said visibility computation.

* * *

12. *A method of reducing a step of visibility computations* in 3-D computer graphics from a perspective of a viewpoint, the method comprising:

[a] computing, before said step and from said perspective, the visibility of at least one entity selected from 3-D surfaces and sub-elements of said 3-D surfaces, wherein said computing step comprises:

[i] employing at least one projection plane for generating projections with said selected set of 3-D surfaces and said sub-elements with respect to said perspective;

[ii] identifying regions on said at least one projection plane, wherein said regions are related to the projections associated with said selected 3-D surfaces, said sub-elements, or bounding volumes of said 3-D surfaces or said sub-elements;

[iii] updating data related to said regions in computer storage; and

[b] deriving the visibility of at least one of said 3-D surfaces or said sub-elements from the stored data in said computer storage; and

skipping, at said step of visibility computations, at least an occlusion relationship calculation for at least one entity that has been determined to be invisible in said computing step.

* * *

1. *A method of reducing the complexity of visibility calculations* required for the production of multi-dimensional computer generated images, said method performed on a computer, said method comprising the steps of:

prior to an occlusion or invisibility relationship computation (known per se) being carried out on a plurality of surfaces from each viewpoint to be calculated:

for selected ones of said surfaces, determining for said viewpoint whether each said selected surface is

(a) an always unoccluded surface, an always hidden surface, or a remaining surface; or

(b) an always unoccluded surface, or a remaining surface; or

(c) an always hidden surface, or a remaining surface; wherein said remaining surface is a surface which is unable to be determined with certainty as to whether it is either unoccluded or
hidden; exempting from said occlusion or invisibility relationship computation those surfaces which are either always unoccluded or always hidden; maintaining a record of said remaining surface; and carrying out occlusion or invisibility relationship computations on said remaining surfaces.

4. A method as claimed in Claim I, wherein said images are selected from a group consisting of graphic images, computer vision data, abstract data and physical data.

5. A method as claimed in Claim I, wherein the reduction in complexity involves a reduction in the number and/or visibility of visibility calculations.

The court in Fuzzysharp Techs. Inc. analyzed the claims at issue under the machine-or-transformation test. The main issue was whether the claims at issue were tied to a “particular” machine. The patentee argued that the limitations, “computations” and “computer storage,” and constructions that referenced “using a data structure in a computer” and “projecting 3D images ‘on a computer screen’” established a sufficient tie to a particular machine. The court rejected this argument noting “[t]he salient question is not whether the claims are tied to a computer,” but “[r]ather, as Bilski makes clear, the question is whether the claims are ‘tied to a particular machine.’” It stated

the claims are not tied to a particular computer, but simply make a generally [sic] reference to ‘a’ computer. Courts applying Bilski have concluded that the mere recitation of ‘computer’ or reference to using a computer in a patent claim is [sic] insufficient to tie a patent claim to a particular machine.

It found DealerTrack, Inc., CyberSource, and three BPAI cases persuasive for this notion.
As a result, the court found the claims at issue invalid under *Bilski.*


The claims at issue in *Accenture Global Servs. GmbH* were directed to:

a computer program for developing component based software for the insurance industry. The program includes a data component, a client component, and a controller component. The client component is responsible for allowing users to edit tasks, add new tasks, and 'achieve an insurance-related goal upon completion,' as well as to generate a historical record of completed tasks.

The claims at issue read as follows:

1. A system for generating tasks to be performed in an insurance organization, the system comprising: an insurance transaction database for storing information related to an insurance transaction, the insurance transaction database comprising a claim folder containing the information related to the insurance transaction decomposed into a plurality of levels from the group comprising a policy level, a claim level, a participant level and a line level, wherein the plurality of levels reflects a policy, the information related to the insurance transaction, claimants and an insured person in a structured format; a task library database for storing rules for determining tasks to be completed upon an occurrence of an event; a client component in communication with the insurance transaction database configured for providing information relating to the insurance transaction, said client component enabling access by an assigned claim handler to a plurality of tasks that achieve an insurance related goal upon completion; and a server component in communication with the client component, the transaction database and the task library database, the server component including an event processor, a task engine and a task assistant; wherein the event processor is triggered by application events associated with a change in the

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209); *Ex Parte* Mitchell, 2009 WL 460662, at *6 (B.P.A.I. Feb. 23, 2009); *Ex parte* Nawathe, No. 2007-3360 at 8, 2009 WL 327520, (B.P.A.I. Feb. 9, 2009) ("Though the calculations may be 'performed on a computer,' they are not tied to any particular computer.") The patentee conceded that the claims were not transformative. See id. at *4.

194. See id. at *5.


196. *Id.* at 580.
information, and sends an event trigger to the task engine; wherein in response to the event trigger, the task engine identifies rules in the task library database associated with the event and applies the information to the identified rules to determine the tasks to be completed, and populates on a task assistant the determined tasks to be completed, wherein the task assistant transmits the determined tasks to the client component.

8. An automated method for generating tasks to be performed in an insurance organization, the method comprising: transmitting information related to an insurance transaction; determining characteristics of the information related to the insurance transaction; applying the characteristics of the information related to the insurance transaction to rules to determine a task to be completed, wherein an event processor interacts with an insurance transaction database containing information related to an insurance transaction decomposed into a plurality of levels from the group comprising a policy level, a claim level, a participant level and a line level, wherein the plurality of levels reflects a policy, the information related to the insurance transaction, claimants and an insured person in a structured format; transmitting the determined task to a task assistant accessible by an assigned claim handler, wherein said client component displays the determined task; allowing an authorized user to edit and perform the determined task and to update the information related to the insurance transaction in accordance with the determined task; storing the updated information related to the insurance transaction; and generating a historical record of the completed task.

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1. A method for generating a file note for an insurance claim, comprising the steps of, executed in a data processing system, of: prefilling a first set of fields with information identifying a file note, said information comprising at least one suffix indicating a type of insurance coverage for a participant in a claim and identification of the participant, wherein the at least one suffix is preselected from one or more types of insurance coverage applicable to the claim; obtaining a selection of fields of a first set of fields from a user, the selection identifying information for a second set of fields; displaying in the second set of fields, the information identified by selection of field of the first set of fields; permitting the user to add data to a predefined text area related to each field of the second set of fields based on the selected fields; generating a file note that contains the first set of fields, the second set of fields, and the data in the predefined text area; identifying a level of significance of the file note; and storing the file note with
the identified level of significance in a claim database including file notes associated with the claim.

9. A method for generating a file note for an insurance claim folder, comprising: providing on a display device a claim folder screen depicting attributes associated with a claim, the attributes comprising at least one suffix indicating a type of insurance coverage for a participant in the claim; permitting the selection of at least one attribute associated with a claim on the claim folder screen; providing on a display device a file note screen depicting the selected at least one attribute in a criteria section, and a text entry section, wherein the text entry section is based on the selected at least one attribute in the criteria section; receiving from a user information associated with the text entry section; generating the file note based on information received from the user; identifying a level of significance of the file note according to information received from the user; and storing the file note with the identified level of significance in a searchable claim database, the claim database associating the file note being with a file note index indicating changes to the file note.

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13. A system for generating a file note for an insurance claim, comprising: prefilling means for prefilling a first set of fields with information identifying a file note, said information comprising at least one suffix indicating a type of insurance coverage for a participant in a claim and identification of the participant, wherein the at least one suffix is preselected from one or more types of insurance coverage applicable to the claim; obtaining means for obtaining a selection of fields of a first set of fields from a user, the selection identifying information for a second set of fields; displaying means for displaying in the second set of fields, the information identified by selection of field of the first set of fields; permitting means for permitting the user to add data to a predefined text area related to each field of the second set of fields based on the selected fields; generating means for generating a file note that contains the first set of fields, the second set of fields, and the data in the predefined text area; and identifying means for identifying a level of significance of the file note; and storing means for storing the file note with the identified level of significance in a claim database including file notes associated with the claim.\(^{197}\)

While the court in *Accenture Global Servs. GmbH* stayed trial “until *Bilski* [was] reviewed,” it issued an opinion one week later to

\(^{197}\) *See id. at 580-82.*
"briefly illuminate[] several of its concerns regarding the patentability of the [claims at issue] under the Bilski framework."  \(^{198}\)

In its transformation analysis, the court found that the claims manipulated "non-tangible information" such as "the cost of automobile repair, hours worked, or the amount of medical expenses."  \(^{199}\) Accordingly, "even if a tangible visual 'display' [was] provided, that visual image would not represent any specific tangible objects (or type of data)."  \(^{200}\)

In its machine analysis, the court explained that limitations such as "claim database," "a display device," "a file note screen," a "searchable claim database," and "a claim folder," while construed "as computer-related," "do not imply a specific computer having any particular programming—they are descriptive of a general computer system at best."  \(^{201}\) Moreover, the claim term—"a data processing system comprising a memory, secondary storage device, central processing unit, input device and video display; the memory contains a program for automatically generating file notes"—also does not rise to the specificity of a particular machine.  \(^{202}\) Relying on Every Penny Counts, Inc. and Research Corp. Tech., Inc., it expressed that "[i]f the architecture of the computer is of no import, it is unclear how the claimed methods are drawn to a specific machine within the meaning of Bilski."  \(^{203}\) In other words, "the patent claims implicate the use of a machine, but a machine does not impose any limit on the claimed methods themselves."  \(^{204}\) Nonetheless, the court conceded that "[i]t is unclear to the court whether (and how) the claims maybe interpreted to define a particularly-programmed computer."  \(^{205}\)

The Accenture court held that although "it is not self evident that the patents are drawn to tangible inventions rather than to concepts... [t]he court may revisit the issue upon defendant's renewed motion should the Supreme Court validate the Bilski

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200. *Id.*
201. *See id.* at 597.
202. *See id.*
203. *Id.*
205. *Id.* at 598.
IV. POST-BILSKI v. KAPPOS JURISPRUDENCE

A. Federal Circuit Cases

1. King Pharm., Inc. v. Eon Labs, Inc.\textsuperscript{207}

On appeal to the Federal Circuit, the court confirmed that "[w]hile a process may be patentable" if it satisfies the machine-or-transformation test, "there is no exclusive test for determining patentability under § 101."\textsuperscript{208} Furthermore, it understood "the Supreme Court to have rejected the exclusive nature of [the machine-or-transformation test], but not necessarily the wisdom behind it.\textsuperscript{209} The Federal Circuit criticized the District Court's analysis in which it "ignored the claim as a whole and improperly focused on one limitation, the 'informing' limitation, in invalidating the claim under § 101."\textsuperscript{210} Nonetheless, it did not find the present case to be "the proper vehicle for determining whether claims covering medical treatment methods are eligible for patenting under § 101" because the claims at issue were anticipated.\textsuperscript{211}

2. Intervet Inc. v. Merial Ltd.

In his concurrence and dissent, Judge Dyk in \textit{Intervet Inc. v. Merial Ltd.}\textsuperscript{212} presented the question of "whether the isolated DNA molecule, separate from any applications associated with the isolated nucleotide sequence . . . is patentable subject matter."\textsuperscript{213} He noted that "such patents do in fact raise serious questions of patentable subject matter" because the Supreme Court "reaffirmed that 'laws of nature, physical phenomena, and abstract ideas' are not patentable."\textsuperscript{214} Specifically, "for a product of nature to satisfy section 101, it must be qualitatively different from the product occurring in nature, with 'markedly different characteristics from any found in nature'" and

\begin{footnotesize}
\begin{enumerate}
\item 206. \textit{Id.} at 599.
\item 207. For a listing of the claims at issue, see \textit{supra} Part III.B.1.
\item 208. \textit{King Pharm., Inc. v. Eon Labs, Inc.}, 616 F.3d 1267, 1274 (Fed. Cir. 2010) (citing Bilski v. Kappos, 130 S.Ct. 3218, 3226-27 (2010)).
\item 209. \textit{Id.} at 1278.
\item 210. \textit{Id.} at 1277.
\item 211. \textit{Id.} at 1278.
\item 212. \textit{Intervet Inc. v. Merial Ltd.}, 617 F.3d 1282 (Fed. Cir. 2010).
\item 213. \textit{Id.} at 1293 (Dyk, J., concurring-in-part and dissenting-in-part).
\item 214. \textit{Id.} at 1294 (quoting Bilski v. Kappos, 130 S. Ct. 3218, 3225 (2010)).
\end{enumerate}
\end{footnotesize}
"[i]t is far from clear that an 'isolated' DNA sequence is qualitatively different from the product occurring in nature."

3. Research Corp. Techs., Inc. v. Microsoft Corp. 216

In Research Corp., 217 the Federal Circuit explained the broad nature of § 101:

[t]he Supreme Court recently reemphasized the significance of the[ four] broad statutory categories with the broadening double "any" exhortation as well. . . . [T]he Supreme Court has "more than once cautioned that courts 'should not read into the patent laws limitations and conditions which the legislature has not expressed." 218

The court stated that "[t]he Supreme Court has articulated only three exceptions to the Patent Act's broad patent-eligibility principles: 'laws of nature, physical phenomena, and abstract ideas.'" 219 With respect to "abstractness," it noted that it is "also a disclosure problem addressed in the Patent Act in section 112." 220 However, "section 101 does not permit a court to reject subject matter categorically because it finds that a claim is not worthy of a patent." 221

The Federal Circuit found that the claims at issue were processes "under both the categorical language of section 101 and the process definition in section 100." 222 Accordingly, it asked whether the claimed subject matter fell within the three judicial exceptions to patent eligibility. 222 Because the court agreed with the parties that the subject matter did not constitute "laws of nature" or "physical phenomena" the court's analysis turned on whether the claims were abstract. 224

In its abstract analysis, the Federal Circuit explained that "[t]he Supreme Court did not presume to provide a rigid formula or

215. Id. at 1294-95.
216. For a listing of the claims at issue, see, supra Part III.B.7.
217. Research Corp. Techs., Inc. v. Microsoft Corp., 627 F.3d 859 (Fed. Cir. 2010)
218. Id. at 867 (quoting Bilski v, Kapps, 130 S. Ct. 3218, 3225 (2010)); Diamond v. Diehr, 450 U.S. 175, 182 (1981)).
219. Id. (quoting Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980)).
220. Id. at 868.
221. Id. (citing Bilski v. Kappos, 130 S. Ct. 3218, 3238-39 (2010) (Stevens, J., concurring)).
222. Id. ("the subject matter is a 'process' for rendering a halftone image.").
223. See id.
224. Id.
definition for abstractness.” "Instead, the Supreme Court invited this court to develop ‘other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text.”

With that guidance, this court also will not presume to define ‘abstract’ beyond the recognition that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act.

Turning to the claims at issue, the Federal Circuit stated that:

The invention presents functional and palpable application in the field of computer technology. These inventions address “a need in the art for a method and apparatus for the halftone rendering of gray scale images in which a digital data processor is utilized in a simple and precise manner to accomplish the halftone rendering.” The fact that some claims . . . require a “high contrast film,” “a film printer,” “a memory,” and “printer and display devices” also confirm this court’s holding that the invention is not abstract. Indeed, this court notes that inventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.

The court further noted that even though “a significant part of the claimed combination” includes “algorithms and formulas,” they “do not bring this invention even close to abstractness that would override the statutory categories and context.” In short, “the patentees here ‘do not seek to patent a mathematical formula;’ rather, ‘they seek patent protection for a process of’ halftoning in computer applications.”

The Federal Circuit determined that the claims at issue were directed to statutory subject matter; however, it explained that “an invention which is not so manifestly abstract as to override the statutory language of section 101 may nonetheless lack sufficient concrete disclosure to warrant a patent” as being “vague or indefinite.”

225. Id. (citing Bilski, 130 S. Ct. at 3326).
226. Id. (quoting Bilski, 130 S. Ct. at 3231).
227. Id.
228. Id. at 868-69 (citation omitted).
229. Id. at 869.
230. Id. (quoting Diamond v. Diehr, 450 U.S. 175, 187 (1981)).
231. Id. (quoting Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1371
4. *Prometheus Labs., Inc. v. Mayo Collaborative Servs.* II\textsuperscript{232}

After the Supreme Court issued its decision in *Bilski v. Kappos*, it granted writ of certiorari to hear the *Prometheus Labs.* case.\textsuperscript{233} The issue was whether the asserted “method of treatment” claims constituted statutory subject matter.\textsuperscript{234} The Court vacated the Federal Circuit’s opinion and remanded the case for further consideration in light of the Supreme Court’s holding in *Bilski*\textsuperscript{235}

On remand, the Federal Circuit contended that “[t]he Supreme Court has consistently construed § 101 broadly.”\textsuperscript{236} The court recognized the limits on patent eligibility.\textsuperscript{237} The patent eligibility of the claims at issue turned on whether they invoked one such limitation, that is, the bar to claims drawn wholly to “natural phenomen[a].”\textsuperscript{238}

The Federal Circuit explained that the Supreme Court’s *Bilski* decision did not “undermine [its] preemption analysis of [the asserted] claims.”\textsuperscript{239} While the Court “rejected” the machine-or-transformation test as the exclusive test for patent eligibility, it “did not disavow the” machine-or-transformation test.\textsuperscript{240} Furthermore, the court held that its application of the machine-or-transformation test as a “useful and important clue, an investigative tool,” leads to a clear and compelling conclusion, viz., that the [asserted] claims pass muster under § 101.”\textsuperscript{241}

Specifically, it applied similar analysis as it did in *Prometheus Labs. I* in finding the “administering” and “determining” steps transformative.\textsuperscript{242} The Federal Circuit found that the “transformation is central to the purpose of the claims, since the determining step is, like the administering step, a significant part of the claimed

\(\text{(Fed. Cir. 2008)}\) (“Thus, a patent that presents a process sufficient to pass the coarse eligibility filter may nonetheless be invalid as indefinite because the invention would ‘not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim.’”).

\textsuperscript{232} For a listing of the claims at issue, see, *supra* Part III.A.2.

\textsuperscript{233} See *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 2010 WL 5175124, at *1 (Fed. Cir. 2010).

\textsuperscript{234} See *id.* at *4.

\textsuperscript{235} *Id.* at *1.

\textsuperscript{236} *Id.* at *5.

\textsuperscript{237} See *id.*

\textsuperscript{238} *Id.* at *6.

\textsuperscript{239} *Id.* at *7.

\textsuperscript{240} *Id.*

\textsuperscript{241} *Id.*

\textsuperscript{242} See *id.* at *7-8.
The Federal Circuit determined that the “administering” and “determining” steps were not “insignificant extra-solution activity” because they were not “merely’ data-gathering steps.”

The court acknowledged that:

[w]hile it is true that the administering and determining steps gather useful data, it is also clear that the presence of those two steps in the claimed processes is not “merely” for the purpose of gathering data. Instead, the administering and determining steps are part of a treatment protocol, and they are transformative.

Moreover, the Federal Circuit noted that “[a] subsequent mental step does not, by itself, negate the transformative nature of prior steps.”

Accordingly, the court held the claims at issue valid under § 101.

B. District Court and ITC Cases

1. Ultramercial, LLC v. Hulu, LLC

The claims at issue in Ultramercial were directed to “a method for allowing Internet users to view copyrighted material free of charge in exchange for watching certain advertisements.” The representative claim reads as follows:

1. A method for distribution of products over the Internet via a facilitator, said method comprising the steps of:

   a first step of receiving, from a content provider, media products that are covered by intellectual-property rights protection and are available for purchase, wherein each said media product being comprised of at least one of text data, music data, and video data;

   a second step of selecting a sponsor message to be associated with the media product, said sponsor message being selected from a plurality of sponsor messages, said second step including accessing an activity log to verify that the total number of times which the sponsor message has been previously presented is less than the

243. Id. at *8.
244. See id. at *9 (quoting Invalidity Opinion, 2008 WL 878910, at *6 (S.D. Cal. Mar. 28, 2008)).
245. Id.
246. Id. at *10.
247. See id. at *11.
249. Id. at *1.
number of transaction cycles contracted by the sponsor of the sponsor message;

a third step of providing the media product for sale at an Internet website;

a fourth step of restricting general public access to said media product;

a fifth step of offering to a consumer access to the media product without charge to the consumer on the precondition that the consumer views the sponsor message;

a sixth step of receiving from the consumer a request to view the sponsor message, wherein the consumer submits said request in response to being offered access to the media product;

a seventh step of, in response to receiving the request from the consumer, facilitating the display of a sponsor message to the consumer;

an eighth step of, if the sponsor message is not an interactive message, allowing said consumer access to said media product after said step of facilitating the display of said sponsor message;

a ninth step of, if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query;

a tenth step of recording the transaction event to the activity log, said tenth step including updating the total number of times the sponsor message has been presented; and an eleventh step of receiving payment from the sponsor of the sponsor message displayed.\textsuperscript{250}

In light of \textit{Bilski v. Kappos}, the court noted “that even after the Supreme Court’s decision in \textit{Bilski}, the machine or transformation test appears to have a major screening function—albeit not perfect—that separates unpatentable ideas from patentable ones.”\textsuperscript{251} In other words, “even though the machine or transformation is no longer the litmus test for patentability, the Court will use it here as a key indicator of patentability.”\textsuperscript{252}

In its machine analysis, the court found the claimed subject matter did not include a tie to a “machine” as defined in \textit{In re

\textsuperscript{250} U.S. Patent No. 7,346,545 (filed May 29, 2001).

\textsuperscript{251} \textit{Ultracemcia}, 2010 WL 3360098, at *3 (quoting Bilski v. Kappos, 130 S. Ct. 3218, 3258 (2010) (Breyer, J., concurring)) (‘‘not [ ] many patentable processes lie beyond [the] reach [of the machine or transformation test].’’).

\textsuperscript{252} \textit{Id.}
Ferguson and In re Nuitjen. First, a “facilitator” is not a machine “such as a computer” because a “facilitator” could be a person. That is, the patent at issue “is not aimed at a computer-specific application; it is a broad claim to the concept of exchanging media for advertisement viewing.” “There is nothing inherently computer-specific about receiving media from a content provider, choosing a sponsor for the media, selecting an ad for the sponsor, verifying the viewer’s activity, assigning passwords, charging the sponsor for the advertisement, or any of the remaining steps.”

Next, relying on CyberSource, the court emphasized that “the Internet is not a machine.” Finally, it explained that “the mere act of storing media on a computer memory does not tie the ... invention to a machine in any meaningful way.” “That the disclosed invention is only used on computers or computer networks cannot alone satisfy the machine test without rendering the test completely toothless.” In other words, a “concept” does not become subject to patent merely “because the patentee claims to have limited its application to the Internet or computers.”

In its transformation analysis, the court held the claims at issue failed to be transformative because “the mere transfer of data from one memory disk on one computer to another memory space in a second computer is not ‘transformation of [an] article’ under § 101.”

Consistent with Bilski v. Kappos, the court looked to whether the patent was directed to an “abstract idea.” In Bilski v. Kappos, the invention was not patent eligible because “the core of the patent was an abstract idea, and the additional limitations did not meaningfully contain the claimed invention.” Here,

[alt the core of the [patent at issue] is the basic idea that one can

253. See id. at *4 (citing In re Ferguson, 558 F.3d 1359, 1364 (Fed. Cir. 2009)).
254. See id.
255. Id.
256. Id. at *5.
257. Id. at *4 (citing CyberSource Corp. v. Retail Decisions, Inc., 620 F. Supp. 2d 1068, 1077 (N.D. Cal. 2009)).
258. Id. While the patent holder did not raise this argument, the court warned such an “argument would have been too farfetched and hence futile.” Id.
259. Id. at *5.
260. Id.
261. Id.
262. See id. at *6.
263. Id.
use advertisement as an exchange or currency. An Internet user can pay for copyrighted media by sitting through a sponsored message instead of paying money to download the media. This core principle, similar to the core of the Bilski patent, is an abstract idea.264

The court further noted that "public television channels have used the same basic idea for years to provide free (or offset the cost of) media to their viewers,"265 which is indicative of an "abstract principle" despite its being aware "of the difference between patentable subject matter and obviousness requirements."266 In addition, "the added features, examples, or limitations"—including "[t]hat the exchange...is carried over the Internet, through a facilitator, using passwords and activity logs"—do "not limit the patent in a meaningful way" because "it would 'preempt use of [the method at issue] in all fields.'"267 Accordingly, the court held the patent at issue invalid.268


The claims at issue in In re Certain Mach. Vision Software, Mach. Vision Sys., and Prods. Containing Same269 were directed to methods for pattern inspection in an image.270 The representative claims read as follows:

1. A method for determining the presence or absence of at least one instance of a predetermined pattern in a run-time image, and for determining the multidimensional location (pose) of each present instance, the method comprising:

providing a model that represents the pattern to be found, the model including a plurality of probes, each probe representing a relative position at which at least one test is performed in an image at a given pose, each such test contributing evidence that the pattern exists at the pose;

providing the run-time image; comparing the model with the run-

264. Id.
265. Id.
266. Id. n.6.
267. See id. (quoting Bilski v. Kappos, 130 S. Ct. 3218, 3231 (2010)).
268. See id. at *7.
time image at each of a plurality of poses;
computing a match score at each pose to provide a match score surface;
locating local maxima in the match score surface;
comparing the magnitude of each local maxima with an accept threshold; and
returning the location of each local maxima with magnitude that exceeds the accept threshold so as to provide the location any instances of the pattern in the image.271

** **

1. A geometric pattern matching method for refining an estimate of a true pose of an object in a run-time image, the method comprising:

generating a low-resolution model pattern using a training image, the low-resolution model pattern including a geometric description of the expected shape of the object at a low spatial resolution, each geometric description including a list of pattern boundary points;

generating a high-resolution model pattern using the training image, the high-resolution model pattern including a geometric description of the expected shape of the object at a high spatial resolution, each geometric description including a list of pattern boundary points;

receiving a starting pose, the starting pose representing an initial estimate of the true pose of the object in the run-time image; receiving a run-time image;

using the low-resolution model pattern, and the starting pose, analyzing the run-time image so as to provide a low-resolution pose that is a more refined estimate of the true pose than the starting pose; and

using the high-resolution model pattern, and the low-resolution pose, analyzing the run-time image so as to provide a high-resolution pose that is a more refined estimate of the true pose than the low-resolution pose.272

The ITC affirmed the administrative law judge’s final initial determination finding the patents at issue invalid for failing to claim patentable subject matter.273

First, the ITC found the claimed subject matter constituted an “abstract idea” “as the asserted claims . . . cover an idea without a link to any real-world undertaking.”274 It explained that “the claimed steps of the patents asserted here, e.g., generating, receiving, analyzing, providing, comparing, and computing, are no more than algorithms or data gathering steps, and neither they nor the patent specification limit the claims to patentable industrial processes.”275 Furthermore, “the asserted claims have unbridled scope and attempt to pre-empt any use of the claimed idea regardless of the machinery used to implement the idea.”276

Next, despite the specification’s teaching the existence of “many imaging devices,” the claims lacked any tie to “any particular machine as required by Supreme Court precedent.”277 In addition, the term “image” “is not required to represent anything real.”278 Rather, it “is a mathematical function . . . as opposed to a physical thing, . . . [a]ccordingly, the broad definition of ‘image’ . . . would cover anything that creates an image, and is therefore not limiting at all.”279

Finally, the International Trade Commission determined the claims were not transformative.280 In particular, “nothing about the image or model claimed . . . is transformed or manipulated in any manner by the asserted claims, and the result itself is not displayed or otherwise transformed.”281 In other words, “the asserted claims do not transform anything, but rather simply collect data.”282

3. Chamberlain Group, Inc. v. Lear Corp.

The claims at issue in Chamberlain Group, Inc.283 were directed to “a remote-control, garage-door opening system, which includes a transmitter and a receiver.”284 The representative claims read as follows:

1. A transmitter for sending an encrypted signal to control an
actuator, comprising:
oscillator for generating a radio frequency oscillatory signal;
apparatus for enabling the sending of an encrypted signal;
binary code generator responsive to the enabling apparatus for
generating a variable binary code, said variable code being
different for each enabling by the enabling device;
trinary code generator for generating a three-valued or trinary code
responsive to the variable binary code; and
transmitting apparatus for modulating the radio frequency
oscillatory signal with the trinary code to produce a modulated
trinary coded variable radio frequency signal for operation or
control of a secure actuator.  \(^{285}\)

* * *

1. A transmitter comprising:
an oscillator for generating a radio frequency oscillatory signal;
a source of a sequence of binary codes, successive binary codes in
the sequence being different from predetermined preceding binary
codes in the sequence;
trinary code generator for converting said sequence of binary codes
to a sequence of trinary codes; and
transmitting apparatus for modulating the radio frequency
oscillatory signal with the binary codes to produce a modulated
trinary coded radio frequency signal for operation or control of a
secure actuator.  \(^{286}\)

17. A transmitter for authorizing access to a secure area by a
control actuator receiver, comprising:
an oscillator for generating a radio frequency oscillatory signal;
a binary code generator for generating a sequence of binary codes,
predetermined ones of the binary codes being different from others
of the binary codes of the sequence;
a trinary code generator responsive to the binary codes for
generating three-valued or trinary codes; and
a transmitting apparatus for modulating the radio frequency
oscillatory signal with the trinary codes to transmit a modulated
trinary coded radio frequency signal to the control actuator
receiver.  \(^{287}\)

\(^{286}\) U.S. Patent No. 6,810,123 B2 (filed Aug. 9, 2002).
\(^{287}\) U.S. Patent No. 6,810,123 B2 (filed Aug. 9, 2002).
The District Court differentiated "between a claim to a product, device, or apparatus, all of which are tangible items, and a claim to a process, which consists of a series of acts or steps." Despite Supreme Court precedent supporting that the same standards of patent eligibility be applied to machines and process, the court held that the machine-or-transformation test is not "appropriate to assess the patentability of the asserted claims." The District Court acknowledged that the Supreme Court "made clear that the [machine-or-transformation test] is used to determine the patentability of a process" and "is not the sole test for deciding whether an invention is a patent-eligible 'process.'" Because the claims at issue were directed to machines and not processes, the court "decline[d]" to apply the machine-or-transformation test. Applying the definition of "machine" from Nujiten, the court found that the "transmitter" was a "physical device" and "an apparatus that generates the signal is of course a machine."

The court cautioned that merely because a claim constitutes ""a machine" does not necessarily render [it] patentable." That is, a claim cannot be "directed to 'laws of nature, physical phenomena, and abstract ideas.'" It stated:

[T]he proper inquiry in dealing with the so called mathematical subject matter exception to § 101 . . . is to see whether the claimed subject matter as a whole is a disembodied mathematical concept, whether categorized as a mathematical formula, mathematical equation, mathematical algorithm, or the like, which in essence represents nothing more than a "law of nature," "natural phenomenon," or "abstract idea." If so, Diehr precludes the patenting of that subject matter.

The court noted that the "preemption concerns are wholly absent in this case" because "[t]he asserted claims are directed to a particular form of transmitter that is used for generating and sending a secure

289. *Id. at* *75 (citations omitted).
290. *See id. at* *75-76 (quoting Bilski v. Kappos, 130 S. Ct. 3218, 3226-27 (2010)).
291. *See id. at* *76.
292. *Id. at* *78-79 (citing SiRF Tech., Inc. v. Int'l. Trade Comm'n., 601 F.3d 1319, 1332 (Fed. Cir. 2010)).
293. *Id. at* *81 n. 13 (quoting Bilski, 130 S. Ct. at 3225).
294. *Id.
295. *Id. at* *81-82 n. 13 (quoting *In re Alappat*, 33 F.3d 1544 (Fed. Cir. 1994)).
signal for the purpose of opening and closing doors or gates.\textsuperscript{296} While "mathematical algorithms are employed within the claimed transmitter," they "are directed to a physical product that is to be used for a specific purpose."\textsuperscript{297} Moreover,

\begin{quote}
[t]he claims do no purport, in any way, to preclude the use of the mathematical algorithms that operate within the transmitter for other purposes. Nor is there any evidence that the physical transmitter of which the algorithms are an underlying part is merely "insignificant extra-solution activity," . . . . The machine, to the contrary, constitutes the very heart of the invention.\textsuperscript{298}
\end{quote}

Accordingly, the court denied the accused infringer's motion for summary judgment of invalidity under § 101.\textsuperscript{299}

V. CONCLUSION

Before \textit{Bilski v. Kappos}, the Supreme Court had refrained from substantively ruling on patent eligibility for almost three decades. The Federal Circuit first tasked the district courts with developing the rules left undetermined in its \textit{Bilski} decision. As some district courts took to this task, the Supreme Court issued its \textit{Bilski} decision, which directed the Federal Circuit to develop patent eligibility rules in line with the Court's principles. While the Federal Circuit waited for what it thought were the right cases to form case law in line with the Supreme Court's directive, more district courts filled in the gaps of the Supreme Court's decision by ruling on patent eligibility issues. Now, Federal Circuit panels are beginning to issue substantive opinions analyzing the Supreme Court's \textit{Bilski} decision. As the law goes through this process of judicial refining—or redefining—patent practitioners, investors, intellectual property asset managers, and business decision-makers are eagerly awaiting for a more certain set of rules to emerge that the courts and USPTO will adopt.

\begin{flushleft}
\footnotesize
\begin{enumerate}
\item \textsuperscript{296} \textit{Id.} at *84.
\item \textsuperscript{297} \textit{See id.}
\item \textsuperscript{298} \textit{Id.} at *84-85.
\item \textsuperscript{299} \textit{Id.} at *85.
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