

# THE CONSEQUENCES OF *IN RE BILSKI* IN THE COURTS AND AT THE BOARD OF PATENT APPEALS AND INTERFERENCES

Authored By:  
Ira S. Matsil, Esq.  
Brian A. Mair, Esq.

- I. INTRODUCTION TO *IN RE BILSKI* AND THE QUESTION OF PATENTABILITY
- II. PATENTABLE SUBJECT MATTER AFTER *IN RE BILSKI*
  - a. PATENTABLE SUBJECT MATTER IN THE COURTS
    - i. *CYBERSOURCE CORP. V. RETAIL DECISIONS, INC*
    - ii. *FORT PROPERTIES, INC. V. AMERICAN MASTER LEASE, LLC*
    - iii. *IN RE FERGUSON*
    - iv. *CLASSEN IMMUNOTHERAPIES, INC. V. BIOGEN IDEC*
  - b. PATENTABLE SUBJECT MATTER AT THE U.S. PATENT AND TRADEMARK OFFICE
    - i. *EX PARTE SESEK*
    - ii. *EX PARTE SRINIVAS GUTTA*
    - iii. *EX PARTE CORNEA-HASEGAN*
    - iv. *EX PARTE BECKER*
    - v. *EX PARTE ATKIN*
    - vi. *EX PARTE BO LI*
    - vii. *EX PARTE BARNES*
- III. CONCLUSION

## I. INTRODUCTION TO *IN RE BILSKI* AND THE QUESTION OF PATENTABILITY

35 U.S.C. § 101 recites:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

While the machine, manufacture, and composition of matter categories enumerated by 35 U.S.C. § 101 may be relatively well understood by their plain meaning, the category of “process” has seen much confusion and litigation since its inception. Such confusion and litigation has created a patchwork of tests and reasons as to what constitutes patentable subject matter and what does not constitute patentable subject matter, with each new case providing yet another clue or test as to what may be considered a patentable “process.”

On October 30, 2008, an en banc panel of the Federal Circuit decided the latest and most definitive of these cases: *In re Bilski*. In *Bilski* the Federal Circuit had to decide whether the eleven claims of Patent Application No. 08/833,892 contained patentable subject matter under 35 U.S.C. § 101. *In re Bilski*, 545 F.3d 943, 2008-2

USTC P 50,621, 88 U.S.P.Q.2d 1385 (Fed. Cir. 2008). *Id.* at 949. An exemplary claim from the *Bilski* application is claim 1, which recited:

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

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

*Id.* at 949. During prosecution of the application, the Examiner rejected these claims under 35 U.S.C. § 101 as not being directed towards patented subject matter because the claim merely manipulated an abstract idea and solved a purely mathematical problem. *Id.* at 950. The Board of Patent Appeals and Interferences, while differing as to the precise reasons the claims were invalid under 35 U.S.C. § 101, did affirm that the claims were not directed towards patentable subject matter. *Id.*

On appeal, the Federal Circuit took the case as an opportunity to “clarify the standards applicable in determining whether a claimed method constitutes a statutory ‘process’ under § 101.” *Id.* at 949. As part of this clarification, the Federal Circuit reiterated that “[w]hether a claim is drawn to a patent-eligible subject matter under § 101 is a threshold inquiry, any claim of an application failing the requirements of § 101 must be rejected even if it meets all of the other legal requirements of patentability.” *Id.* at 950. Then, in trying to determine whether a given claim, and, consequently, the Applicants’ claims, is a new and useful process under § 101, the Federal Circuit turned to Supreme Court decisions and decided that the true question was “whether Applicants’ claim recites a fundamental principle and, if so, whether it would pre-empt substantially all uses of that fundamental principle if allowed.” *Id.* at 954. To help with this analysis the Federal Circuit relied upon the “machine-or-transformation test” put forth by the Supreme Court in *Benson*: “A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” *Id.*, citing *Gottschalk v. Bneson*, 409 U.S. 63, 70 (1972).

While the Federal Circuit did not analyze the “machine” prong of the “machine-or-transformation” test (as this was not before the court), the Federal Circuit discussed in detail multiple issues surrounding the “transformation” prong. *Id.* at 962. For instance, the Federal Circuit discussed two corrolaries to the “transformation” prong. The first, a holding of the *Diehr* decision, is that “field-of-use limitations are generally insufficient to render an otherwise ineligible process claim patent-eligible. *Id.* at 957, citing *Diamond v. Diehr*, 450 U.S. 175, 191-192 (1981). The second, also from the *Diehr* decision, is that “insignificant postsolution activity will not transform an unpatentable principle into a patentable process.” *Id.*

The Federal Circuit also reviewed some of the tests that had previously been used in the 35 U.S.C. § 101 analyses. The first test reviewed was known as the Freeman-Walter-Abele test, which (1) determines whether the claim recites an “algorithm” within

the meaning of *Benson*, then (2) determines whether that algorithm is “applied in any manner to physical elements or process steps.” *Id.* at 958-959. The second test reviewed was the “useful, concrete, and tangible result” test which found patentable subject matter if the claimed process generated a “useful, concrete, and tangible result.” *Id.* Finally, the Federal Circuit looked at the “technological arts test.” *Id.* at 960. The Federal Circuit, after reviewing these tests, declared all of them either inadequate or else untested and unclear, and, as such, declined to supplement the “machine-or-transformation” test with any of these so-called tests, and specifically stated that, when looking at the cases that articulated some of these tests, “[t]o the extent that some of the reasoning in these decisions relied on considerations or tests, such as ‘useful, concrete and tangible result,’ that are no longer valid as explained above, those aspects of the decisions should no longer be relied on.” *Id.* at 961.

However, the Federal Circuit did not do away with all of the old analyses, and specifically maintained some aspects of their reasonings. For example, the Federal Circuit relied on the Supreme Court's holding in *Benson* 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.” *Id.* Secondly, the Federal Circuit retained the reasoning that “the involvement of the machine or transformation in the claimed process must not merely be insignificant extrasolution activity.” *Id.* at 962.

Finally, in looking at the specific claims of the *Bilski* case, the Federal Circuit went through the “machine-or-transformation” test and held that the claims did not transform any article to a different state or thing. *Id.* at 963. Being even more specific, the Federal Circuit also set forth a very specific example of what is not patentable subject matter under 35 U.S.C. § 101: “purported transformations or manipulations simply of public or private legal obligations or relationships, business risks, or other such abstractions cannot meet the test because they are not physical objects or substances, and they are not representative of physical objects or substances.” *Id.* As such, the Federal Circuit affirmed the Board’s decision to reject the claims under 35 U.S.C. § 101. *Id.* at 966.

Accordingly, as can be seen above in the sheer scope of changes, the Federal Circuit’s *Bilski* decision has sent shock waves through the practice of patent law by sweeping away many of the old tests for patentable subject matter while also restricting the remaining tests beyond the previous limits. Since this case was decided, the various courts and the Board of Patent Appeals and Interferences have worked to apply this new reality to the cases that come before them. This paper attempts to illustrate some of these decisions and rationales that the courts and the Board have used while applying *Bilski* to their cases while fleshing out some of the remaining questions and ambiguities that remain even after *Bilski*.

## **II. PATENTABLE SUBJECT MATTER AFTER *IN RE BILSKI***

After *In re Bilski* the courts and the Board of Patent Appeals and Interferences have had to try and apply the tests and reasonings which the Federal Circuit put forth. As discussed more fully in the following sections, the courts and the Board appear to have a mixed understanding of the current state of 35 U.S.C. § 101.

## A. PATENTABLE SUBJECT MATTER IN THE COURTS

### i. *Cybersource Corp. v. Retail Decisions, Inc.*

In *Cybersource Corp. v. Retail Decisions, Inc.*, 2009 WL 815448 (N.D.Cal., 2009), Cybersource asserted claims 2 and 3 of U.S. Patent No. 6,029,154 against Retail Decisions. *Id.* at 1. Retail Decisions brought a motion for summary judgment of invalidity, contending that the patent claims are not drawn to patent-eligible subject matter under 35 U.S.C. § 101. *Id.* Exemplary claim 2 recited:

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:

- a) obtaining credit card information relating to the transactions from the consumer; and
- b) verifying the credit card information based upon values of a 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 other transactions utilizing 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.

In support of patentability, Cybersource argued that the method recited in the claims manipulates both credit card numbers as well as IP addresses, and, therefore, meets the “transformation” prong of the “machine-or-transformation” test. *Id.* at 3. Alternatively, Cybersource argued that claim 2 was a “Beauregard claim” not subject to *Bilski’s* analysis. *Id.* Finally, looking at the “machine” prong of the test, Cybersource argued that the claims were tied to the entire internet, and, thus, were tied to a specific machine, thereby meeting the “machine” prong of the test. *Id.* at 5.

Analyzing the claims under the “machine-or-transformation” test, the district court first looked at the transformation prong and Cybersource’s argument that the claims manipulated credit card numbers. *Id.* at 3. Noting first that the test is whether the steps “transform” instead of the less-restrictive “manipulate,” the district court then stated that “it is difficult to distinguish this creation of a data structure from the combination of a data gathering step and an algorithm.” *Id.* As such, the manipulation of data as recited in the claims did not rise to the level of “transformation” as required by *Bilski*. *Id.*

However, the court did not stop there in its analysis of the “credit card transformation” prong of the test. As stated, “[e]ven if the court were to hold that ‘manipulation’ suffices to effect a ‘transformation,’ the question would remain whether either claim transforms an private ‘article.’” *Id.* at 4. Deciding this question in the negative, the district court held that “a credit card number no more represents a physical

credit card than a card represent a number” and “[b]oth the number and the card represent a common underlying abstraction—a credit card account, which is a series of rights and obligations existing between an account holder or account holders.” *Id.* Accordingly, because *Bilski* held that transformation of “private legal obligations or relationships” do not meet the transformation test, credit card accounts are not “articles” and cannot meet the transformation prong of the test. *Id.*

The district court next looked at the transformation of IP addresses. *Id.* at 5. However, upon analysis, the district court pointed out that an IP addresses “is not an object of transformation; indeed, it would make no sense to change the IP address, since its purpose is to serve as an identifier.” *Id.* As such, because there is no actual transformation, this does not meet the transformation prong of the test. *Id.*

The district court then turned its attention to the machine prong of the test, and specifically to Cybersource’s argument that the entire internet (e.g., the myriad general and special purpose computers, routers, hubs, switches, and other specialized hardware) is the machine implementation of its method. *Id.* at 5. Upon analysis, the district court pointed out that a claimed process must be tied to a “particular machine” while the internet is an abstraction. *Id.* at 6. The district court also determined that, because the process can be carried out in contexts other than the internet, the “involvement of the internet will not qualify as such where it merely constitutes ‘insignificant extrasolution activity.’” *Id.* Finally, the district court decided that the “use of the internet does not impose meaningful limits” on the scope of the claims.” For these reasons, the district court held that the claims did not meet the machine prong of the test. *Id.*

Finally the district court looked at Cybersource’s argument that the claims were “Beauregard Claims” and, therefore, patentable. *Id.* at 7. In response to this argument, the district court made two conclusions that bode ill for the patentability of “Beauregard Claims.” *Id.* at 9. The first conclusion was that “there is at present no legal doctrine creating a special ‘Beauregard claim’ that would exempt claims 2 of the ‘154 patent from the analysis of *Bilski*” and that “the footing of the so-called Beauregard doctrine is anything by sure.” *Id.* Secondly, the district court decided that, even if there were a legal doctrine, a “Beauregard claim” is still merely an exception to the traditional printed matter rule for computer programs embedded in a tangible medium while the current claims at issue claimed a process “implemented through *unspecified* program instructions.” *Id.*, emphasis in original. As such, the claims simply do not claim anything that could be said to be printed matter, and, under *Bilski*, “simply appending ‘A computer readable media including program instructions...’ to an otherwise non-statutory process claim is insufficient to make it statutory.” *Id.*, citing *Ex Parte Cornea-Hasegan*, 89 U.S.P.Q.2d 1557, 1561 (B.P.A.I. 2009). Accordingly, the district court decided to grant the defendant’s motion for summary judgment of invalidity. *Id.* at 10.

## **ii. *Fort Properties, Inc. v. American Master Lease, LLC***

In *Fort Properties, Inc. v. American Master Lease, LLC*, Fort Properties filed suit seeking a declaration that it was not infringing Patent No. 6,292,788 B1 and filed a motion for summary judgment that the ‘788 Patent was invalid because the patent failed to meet the patentability test set forth in *Bilski*. *Fort Properties, Inc. v. American Master*

*Lease, LLC*, 2009 WL 249205, 1-2 (C.D.Cal. 2009). The first independent claim of the ‘788 Patent (which is representative of all 41 claims), recited:

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.

Patent No. 6,292,788, claim 1. In other words, the ‘788 discusses a business method for creating an investment interest out of real property.

In support of the summary judgment, Fort Properties put forth two separate *Bilski* arguments. First, Fort Properties put forth that the patented claims failed the *Bilski* test because none of the claims are tied to a machine or apparatus and none transform any article or thing. *Id.* at 2. *Fort Properties* at Secondly, Fort Properties also argued that the ‘788 patent was only deemed patentable by the Patent Office based upon the “useful, concrete, and tangible result” test, which had been explicitly rejected by *Bilski*. *Id.* at 3.

In response, American Master Lease argued that at least some of the claims (e.g., claim 1 above) require the creation of deedshares, and that, “there can be no greater transformation for an article than the very creation of the article itself. *Id.* at 4. Accordingly, because these claims required a transformation, they met the requirements of *Bilski*. *Id.* at 4.

The court, in looking at the prosecution history, decided that the Examiner’s decision to allow the claims relied in large part on the “useful, concrete, and tangible result” test that had been expressly rejected by *Bilski*. *Id.* at 3. As such, the Court decided to re-examine the claims of the ‘788 patent under the proper machine-or-transformation test. After a cursory examination of the machine test (the patent holder admitted that the recited methods “need not be performed by a computer”), the Court decided that, because the deedshares in the claims are nothing more than the transformation or manipulation of legal ownership interests in real estate, not a transformation of an article or thing, then this is nothing more than an arrangement of conceptual legal rights, not physical objects. *Id.* at 4. As such, because the claims did not meet either prong of the *Bilski* test, the claims did not recite patentable subject matter. *Id.* at 5.

### iii. *In re Ferguson*

In *In re Ferguson* the Applicants for a patent appealed from a final decision of the Board of Patent Appeals and Interferences which had previously sustained the 35 U.S.C. § 101 rejection of all sixty-eight claims of their application. *In re Ferguson*, 558 F.3d 1359, 1361 (Fed. Cir. 2009). Claim 1, as a representative method claim, recited:

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.

*Id.* at 1361.

In support of patentability, the Applicants argued that the method claims were tied to the use of a shared marketing force. *Id.* at 1364. Applicants further proposed a new test for patentability under 35 U.S.C. § 101: “Does the claimed subject matter require that the product or process has more than a scintilla of interaction with the real world in a specific way?” *Id.* at 1364.

While cursorily dismissing this new test (“In light of this court’s clear statements that the ‘sole,’ ‘definitive,’ ‘applicable,’ ‘governing,’ and ‘proper’ test for a process claim under § 101”), the Court returned to the two pronged test under *Bilski*. *Id.* at 1364-1365 and 1363, respectively. In looking at whether the method claims were tied to a particular machine or apparatus, the Court addressed Applicants’ position that the claims were tied to the use of a shared marketing force by bluntly stating “a marketing force is not a machine or apparatus” because a the claims were “not tied to any concrete parts, devices, or combination of devices.” *Id.* at 1364. As such, it did not meet the particular machine or apparatus test. *Id.*

The Court next looked at whether the method claims transformed any article into a different state or thing. In reviewing the claims, the Court held that, “at best it can be said that Applicants’ methods are directed to organizing business or legal relationships in the structuring of a sales force.” *Id.* Because of this, and because the Court in *Bilski* had stated “[p]urported transformations or manipulations simply of public or private legal obligations or relationships...cannot meet the test because they are not physical objects or substances,” the Court held that the method claims did not meet either prong of the machine-or-transformation test, and were, therefore, not drawn to patent-eligible subject matter. *Id.*

On a separate issue, the Applicants in *In re Ferguson* had additionally put forth a series of “paradigm claims,” such as their proposed claim 24, which recited:

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.

*Id.* at 1361. In reviewing these claims for patentability under 35 U.S.C. § 101, the Court reiterated that, “[a]lthough we need not resolve the particular class of statutory subject matter into which Applicants’ paradigm claims fail, the claims must satisfy at least one category.” *Id.* at 1365. After deciding that the paradigm claims do not meet the processes, manufacture, or composition of matter

categories of patentable subject matter, the Court looked at the Applicants' argument that "[a] company is a physical thing, and as such analogous to a machine." *Id.* However, as the Applicants admitted to the Court that "you cannot touch the company," the Court held that a company is not a machine, and that Applicants' claims were directed towards the "paradigmatic 'abstract ideas.'" *Id.* Accordingly, the Court held that the Applicants' paradigm claims were also not drawn to patentable subject matter, and upheld the rejections of the Board of Patent Appeals and Interferences. *Id.* at 1361.

#### ***iv. Classen Immunotherapies, Inc. v. Biogen IDEC***

In *Classen Immunotherapies, Inc. v. Biogen IDEC*, the Federal Circuit quickly and briefly affirmed the holdings of a district court which held that Patent Nos. 5,723,283; 6,420,139; and 6,638,739 were invalid under 35 U.S.C. § 101, by stating "[i]n light of our decision in *In re Bilski*...we affirm that district court's grant of summary judgment." *Classen Immunotherapies, Inc. v. Biogen IDEC*, 304 Fed.Appx. 866, 867 (Fed. Cir. 2009). In this case Classen sued Merck (among others) and Merck filed counterclaims of invalidity against these patents. *Classen Immunotherapies, Inc. v. Biogen IDEC*, 2006 WL 6161856, 1 (D.Md. 2006). In this case, representative claims include claim 1 of the '283 patent and claim 1 of the '139 patent. Claim 1 of the '283 patent recited:

A method of determining whether an immunization schedule affects the incidence or severity of a chronic immune-mediated disorder in a treatment group of mammals, relative to a control group of mammals, which comprises immunizing mammals in the treatment group of mammals with one or more doses of one or more immunogens, according to said immunization schedule, and comparing the incidence, prevalence, frequency or severity of said chronic immune-mediated disorder or the level of a marker of such a disorder, in the treatment group, with that in the control group.

Patent No. 5,723,283, claim 1. Claim 1 of the '139 patent recited:

A method of immunizing a mammalian subject while reducing the risk of said subject thereby developing at least one chronic immune-mediated disorder, which comprises: (I) screening a plurality of immunization schedules, by (a) identifying a first group of mammals and at least a second group of mammals, said mammals being of the same species, the first group of mammals having been immunized with one or more doses of one or more infectious disease-causing organism-associated immunogens according to a first screened immunization schedule, and the second group of mammals having been immunized with one or more doses of one or more infectious disease-causing organism-associated immunogens according to a second screened immunization schedule, each group of mammals having been immunized according to a different immunization schedule, and (b) comparing the effectiveness of said first and second screened immunization schedules in protecting against or inducing a chronic immune-mediated disorder in said first and second groups, as a result of which one of said screened immunization schedules may be identified as a lower risk screened immunization schedule and the other of said screened schedules as a higher risk screened immunization schedule with regard to the risk of developing said chronic immune mediated disorder(s),

where the first dose of at least one infectious disease-causing organism associated immunogen given to both groups is given sooner after birth according to one or more of the screened immunization schedules than according to one or more of the other screened immunization schedules, each such immunogen so administered being hereafter referred to as an "early" immunogen regardless of its time of administration in the latter schedule(s),

where at least one of said chronic immune-mediated disorders is diabetes,

where said mammalian subject is or said mammals are humans,

where at least one of said early immunogens is one other than BCG or pertussis immunogen, and (II) immunizing said subject according to a subject immunization schedule, according to which at least one of said early infectious disease-causing organism-associated immunogens is administered to the subject at about the same dates, relative to the date of birth as it was administered to the mammals in said lower risk screened immunization schedule, which administration is associated with a lower risk of development of said chronic immune-mediated disorder(s) than when said immunogen was administered according to said higher risk screened immunization schedule.

Patent No. 6,420,139, claim 1.

In holding the claims of the '283 patent invalid, the district court stated that "the 283 patent describes only a general inquiry of whether the proposed correlation between an immunization schedule and the incidence of chronic disorders exists." *Id.* at 5. Because of this, the court held that "the process is indistinguishable from the idea itself," and, therefore, "the 283 patent seeks to patent an unpatentable natural phenomenon." *Id.*

In holding that the '139 and the '739 patents were invalid, the district court related these claims to the claims of the '283, and stated "the 139 and the 739 patents describe little more than an inquiry of the extent of the proposed correlation between vaccines and chronic disorders." *Id.* Further, dealing with the fact that these claims actually recited steps of immunizing patients, the court held that this step was mere "[i]nsignificant post-solution activity" and that, because "the 139 and the 739 patents are an indirect attempt to patent the idea that there is a relationship between vaccine schedules and chronic immune mediated disorders," these claims were an attempt to patent an unpatentable natural phenomenon. *Id.* at 6.

## **b. PATENTABLE SUBJECT MATTER AT THE U.S. PATENT AND TRADEMARK OFFICE**

### **i. Ex Parte Seseek**

In *Ex Parte Seseek*, the Board of Patent Appeals and Interferences was asked to review an Examiner's 35 U.S.C. § 102(b) and § 103(a) rejections of the claims in Application number 10/022,142. *Ex Parte Seseek*, 2009 WL 803089, 1 (Bd.Pat.App. & Interf., 2009). While sustaining these rejections on their own grounds, the Board additionally decided to add a new rejection under 35 U.S.C. § 101 following the Bilski decision. *Id.* A representative claim from this application is claim 1, which recited:

A method of feed forward mail load notification to a carrier in a mass mailing operation, comprising the steps of:  
monitoring an actual mail production characteristic;  
transmitting a mail load forecast to the carrier, the mail load forecast corresponding to a predicted number of mail pieces determined at least in part by the actual mail production characteristic; and  
notifying the carrier of a change in said mail load forecast if said monitoring step indicates a variance in the mail production characteristic that can affect the accuracy of the transmitted mail load forecast.

*Id.* While acknowledging that the claim recites method steps and was, therefore, at least nominally drawn to a process, the Board went on to state that, nevertheless, “the proper inquiry under § 101 is not whether the process claim recites sufficient ‘physical steps,’ but rather whether the claim meets the machine-or-transformation test.” *Id.* at 5.

In looking at the machine-or-transformation test, the court immediately dismissed the machine part, as the claim “does not recite a machine or apparatus.” *Id.* As for a transformation, the Board stated that “claim 1 does not transform the mail or any other particular article” and that while the claim does transmit a forecast and, if needed, an updated forecast, “a forecast is not a particular article since it is not physical object or substance nor does the forecast represent a physical object or substance.” *Id.* Accordingly, the Board held that the claims of the application were drawn to non-patentable subject matter. *Id.* at 6.

## ii. *Ex Parte Srinivas Gutta*

In *Ex Parte Srinivas Gutta*, Applicants requested the Board of Patent Appeals and Interferences to review an Examiner’s rejection of the claims in Application No. 10/014,202 under 35 U.S.C. § 102(b). *Srinivas Gutta*, Appeal No. 2008-3000, 1 (Bd.Pat.App. & Interf., 2009). While affirming-in-part the 35 U.S.C. § 102(b) rejection, the Board additionally added a new rejection of the claims under 35 U.S.C. § 101 after the *Bilski* decision. *Id.* at 3. Exemplary claim 1 from the application recited:

A computerized method performed by a data processor for recommending one or more available items to a target user, comprising the steps of:  
obtaining a history of selecting one or more available items by at least one third party;  
partitioning a third party selection history into a plurality of clusters, wherein each cluster contains items that are closer to the mean of the cluster than any other cluster from among the plurality of clusters,  
modifying a target user’s history of selecting said one or more available items with one or more third party clusters to produce a modified target user’s history;  
processing the modified target user’s history to generate a target user profile, wherein the modified target user’s history characterized preferences of the target user as modified to reflect preferences of the third party;  
generating a recommendation score for at least one of said available items based on said target user’s profile; and  
displaying the recommendation score to the target user.

*Id.* at 2.

While quickly disposing of the transformation prong of the machine-or-transformation test by stating that the data “represents information about user

selection histories, an intangible,” the Board did recognize that certain limitations of claim 1, such as “[a] computerized method performed by a data processor” and “displaying the [calculated result] to [a] target user” may arguably be construed to tie the claimed process to a particular machine (thus meeting the “machine” prong of the machine-or-transformation test). *Id.* at 5. The Board also recognized that that the Federal Circuit had declined to decide this particular issue in *Bilski*. *Id.* at 4.

Looking at the first limitation of “[a] computerized method performed by a data processor,” the Board held that, because this limitation “adds nothing more than a general purpose computer that is associated with the steps of the process in an unspecified manner,” “[s]uch a field-of-use limitation is insufficient to render an otherwise ineligible process claim patent eligible.” *Id.* at 5, citing *Bilski*, 545 F.3d at 957. As such, the Board held that this limitation failed to impose any meaningful limits on the claim’s scope. *Id.*

Further, regarding the second limitation, “displaying the [calculated result] to [a] target user,” the board held that the step of “displaying” did not need to be performed by any particular structure, and that it may even be accomplished by writing the resulting score on a piece of paper. *Id.* Noting that the allowance of such a claim based upon this limitation would “exalt form over substance,” the Board held that this limitation, as well as the “computerized method” limitation, were “insufficient to impart patentability to a claim involving the solving of a mathematical algorithm.” *Id.* at 5-6.

### iii. *Ex Parte Cornea-Hasegan*

In *Ex Parte Cornea-Hasegan*, the Board was asked to review the Examiner’s rejections under 35 U.S.C. § 101 of claims 1-10 and 18-27 of Application No. 10/328,572. *Cornea-Hasegan*, Appeal No. 2008-4742, 2 (Bd.Pat.App. & Interf., 2009). Exemplary claim 1 recited:

A method, comprising:  
normalizing by a processor operands, a, b, and c for a floating point operation;  
predicting by the processor whether result d of said floating point operation on a, b, c might be tiny;  
if so, then scaling by the processor said a, b, c to form a’, b’, c’;  
calculating by the processor result d’ of said floating-point operation on said a’, b’, c’;  
determining by the processor whether said f is tiny based upon said result d’;  
if so, then calculating by the processor said d using software; and  
if not, then calculating by the processor said d using floating-point hardware.

*Id.* at 2-3. The applicants contended that claim 1 recited patentable subject matter because (1) the claim physically transforms an article to a different state, and (2) the claim was directed to patentable subject matter because it passed the “useful, concrete and tangible results” test described in *State Street* and *AT&T*. *Id.* at 3.

Starting with the “machine-or-transformation” test, the board noted that claim 1 merely recites “a series of process steps performed by a ‘processor.’” *Id.* at 9. The Board then noted that merely reciting a processor does not tie the process steps to a particular machine and does not limit the process steps to any

specific machine or apparatus. *Id.* Specifically, the Board stated “the recitation of a ‘processor’ performing various functions is nothing more than a general purpose computer that has been programmed in an unspecified manner to implement the functional steps recited in the claims” and that “the recitation of a processor in combination with purely functional recitation of method steps, where the functions are implemented using an unspecified algorithm, is insufficient to transform otherwise unpatentable method steps into a patent eligible process.” *Id.* at 9-10. Finally, the Board stated that, to hold otherwise “would exalt form over substance and would allow pre-emption of the fundamental principle present in the non-machine implemented method by the addition of the mere recitation of a ‘processor.’” *Id.* at 10.

The Board further decided that, because the data represents information about an abstract floating-point number, which is intangible, claim 1 also fails the transformation test. *Id.* Specifically, the claimed method steps “merely determine a result d from a mathematical algorithm” and the “claim is directed to abstract ideas and/or data structures per se.” *Id.* “The steps manipulating other data (floating-point operands) and determining whether to calculate d using floating point hardware are insignificant extra-solution activity.” *Id.* Accordingly, the claim failed both prongs of the “machine-or-transformation” test, and did not recite patentable subject matter. *Id.* at 13.

Applicant also argued an additional point with regards to claim 18, which recited:

A computer readable media including program instructions which when executed by a processor cause the processor to perform the following:  
normalizing operands a, b, and c for a floating-point operation;  
utilizing the results of a hardware prediction unit predicting whether result d of said floating-point operation on said a, b, c might be tiny;  
if so, then scaling said a, b, c to form a', b', c';  
calculating result d' of said floating-point operation on said a', b', c';  
determining whether said d is tiny based upon said result d';  
if so, then calculating said d using software; and  
if not, then calculating said d using floating-point hardware.

*Id.* at 3. With regards to claim 18, the Applicants additionally argued that this claim, because it recited “computer readable media,” was directed to an article of manufacture, and, therefore, patentable. *Id.* at 4. While recognizing that the claimed “computer readable media” limits the scope of claimed media, the Board decided that “analysis of a ‘manufacture’ claim and a ‘process’ claim is the same under § 101.” *Id.* at 11, citing *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1999). Finally, similar to claim 1, the Board decided that “[l]imiting the claim to computer readable media does not add any practical limitation to the scope of the claim” and that “[s]uch a field-of-use limitation is insufficient to render an otherwise ineligible claim patent eligible.” *Id.* at 12. As such, the Board affirmed the Examiner’s 35 U.S.C. § 101 rejections. *Id.* at 13.

#### **iv. Ex Parte Becker**

In *Ex Parte Becker* the Board of Patent Appeals and Interferences was asked to review an Examiner's rejections of the claims of Patent Application 09/948,563 under 35 U.S.C. § 112, first paragraph, and 35 U.S.C. § 102(e). *Becker*, Appeal No. 2008-2064, 3 (Bd.Pat.App. & Interf., 2009). While the Board reversed the Examiner's decision regarding 35 U.S.C. § 102(e) and affirmed the Examiner's decision regarding the claims under 35 U.S.C. § 112, first paragraph, the Board also entered a new rejection for claims 7-11 and 13 under 35 U.S.C. § 101. *Id.* at 12. Exemplary claim 7 of the application recited:

A method for creating a hierarchically structured automation object and embedding said automation object into an engineering system, said method comprising:  
creating a first component operable to generate system functionality of said automation object, wherein the general system functionality relates to an overall functionality of the engineering system;  
creating a second component operable to generate generic based functionality of said automation object, wherein the generic base functionality is common to all other automation objects;  
creating a third component with functionality that is operable to manage at least one module corresponding to said automation object;  
creating a first module component corresponding to the at least one module, said first module component being operable to generate the system functionality;  
creating a second module component corresponding to the one module, said second module component being operable to generate the base functionality;  
creating a third module component corresponding to the at least one module, said third module component being operable to generate the technical functionality, and inter-networking said first, second and third component and said first, second and third module components,  
wherein the first, second, and third component form a hierarchical structure.

Amended Appeal Brief dated Feb. 21, 2006, p. 31-32. In looking at the machine-or-transformation test from *Bilski*, the Board held that claim 7 does not transform physical subject matter because "transformation of data, without a machine, is insufficient to establish patent-eligibility under § 101." *Becker* at 11. Additionally, the board held that claim 7 "does not require a particular machine or apparatus." *Id.* As such, the Board held that claims 7-11 and 13 were not directed to statutory subject matter under 35 U.S.C. § 101. *Id.*

#### **v. *Ex Parte Atkin***

In *Ex Parte Atkin* the Board of Patent Appeals and Interferences was asked to review an Examiner's 35 U.S.C. § 103(a) rejections of claims in Application No. 09/891,341. *Atkin*, Appeal No. 2008-4352, 1 (Bd.Pat.App. & Interf., 2009). While the Board reversed the Examiner's 35 U.S.C. § 103(a) rejection of claims 1-15, the Board additionally added a new ground of rejection under 35 U.S.C. § 101 for claims 1-4, 9-13, and 15. *Id.* at 2. Exemplary claim 1 recited:

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

Establishing a plurality of labels within a unidirectional domain name by using a pre-determined full stop punctuation mark as a delimiter between said labels, said labels having an original label display order as encountered from left to right;  
Within each said label, performing inferencing through resolving the direction of indeterminate characters by assigning a strong direction left or right to each indeterminate character; and  
Reordering said characters within each said label of said unidirectional domain name into character display order using the fully resolved characters previously inferenced, thereby converting said uni-directional domain name to a bidirectional domain name in which said original label display order is preserved, and bidirectionality of characters within each label is produced.

*Id.* at 11-12.

Examining this claim under *Bilski's* machine-or-transformation test, the Board noted that claim 1 “does not recite any machine or apparatus or call for transforming an article into a different state or thing.” *Id.* at 16. Specifically discussing claim 1’s domain name as a possible article for transformation, the Board stated “[a] domain name is simply a series of characters representing the address of a resource, such as a server, on the World Wide Web.” *Id.* As such, all of the steps are data manipulation steps, and were unpatentable. *Id.*

The Board also reviewed claims 9-12 and 15 independently from claims 1-4. Claim 9 was essentially claim 1 in “system” form, and recited:

A system for converting a unidirectional domain name to a bidirectional domain name comprising:  
a label definer adapted to establish a plurality of labels within a unidirectional domain name by using a pre-determined full stop punctuation mark as a delimiter between said labels, said labels having an original label display order as encountered from left to right;  
an inferencer adapted to, within each said label, resolve the direction of indeterminate characters by assigning a strong direction left or right to each indeterminate character; and  
a character reorderer adapted to reorder said characters within each said label of said unidirectional domain name into character display order using the fully resolved characters previously inferenced, thereby converting said uni-directional domain name to a bidirectional domain name in which said original label display order is preserved and bidirectionality of characters within each label is produced.

*Id.* at 16. In reviewing this claim, the court noted that “[t]he term ‘system’ in the preamble is broad enough to read on a method and thus does not imply the presence of any apparatus.” *Id.* at 17. Further, recitations of components such as “label definer,” “inferencer,” and a “character reorderer,” fail to serve as structural limitations because “(1) they are not ‘means’ recitations subject to interpretation under 35 U.S.C. § 112, sixth paragraph, and (2) they would not have been understood in the art as implying any particular structure. *Id.* Given this, the Board decided to interpret claim 9 as encompassing any and all means for performing the recited functions, and consistent with this interpretation, also rejected these claims under 35 U.S.C. § 101 as these claims were at least as broad as the rejected method claims (e.g., claim 1 recited above). *Id.* at 17-18, citing *Ex Parte Miyazaki*, 89 USPQ2d 1207 (BPAI 2008).

#### **vi. *Ex Parte Bo Li***

In *Ex Parte Bo Li* the Board was asked to review a 35 U.S.C. § 101 rejection of claim 42 of Application No. 10/463,287. *Bo Li*, Appeal No. 2008-1213, 4 (Bd.Pat.App. & Interf., 2008). Claim 42 recited:

- A computer program product, comprising a computer usable medium having a computer readable program code embodied therein, said computer readable program code adapted to be executed to implement a method for generating a report, said method comprising:
  - Providing a system, wherein the system comprises distinct software modules, and wherein the distinct software modules comprise a logic processing module, a configuration file processing module, a data organization module, and a data display organization module;
  - Parsing a configuration file into definition data that specifies: a data organization of the report, a display organization of the report, and at least one data source comprising report data to be used for generating the report, and wherein said parsing is performed by the configuration file processing module in response to being called by the logic processing module;
  - Extracting the report data from the at least one data source, wherein said extracting is performed by the data organization module in response to being called by the logic processing module;
  - Receiving, by the logic processing module, the definition data from eh configuration file processing module and the extracted report data from the data organization module; and
  - Organizing, by the data display organization module in response to being called by the logic processing module, a data display organization of the report, wherein said organizing comprises utilizing the definition data received by the logic processing module and the extracted report data received by the logic processing module.

*Id.* at 3-4. In arguing for the patentability of this claim, Appellants contended that claim 42 related to a physical device, and, therefore, contained statutory subject matter. *Id.* at 4. The Examiner, however, maintained his rejection because the claim produced no “useful, concrete and tangible result” as indicated by *State St. Bank & Trust v. Signature Fin. Group*. *Id.* at 8.

In deciding the case, the Board first noted that the Federal Circuit, in *In re Bilski*, removed *State Street* from being dispositive on this issue. *Id.* However, instead of applying the machine-or-transformation test, the Board then noted that “[i]t has been the practice for a number of years that a ‘Beauregard Claim’ of this nature be considered statutory at the USPTO as a product claim.” *Id.* at 9. Finally, the Board noted that the software components were embodied upon a computer readable medium, and that “[t]his combination has been found statutory under the teachings of *In re Lowry*, 32 F.3d 1579 (Fed. Cir., 1994).” *Id.* Accordingly, the Board reversed the 35 U.S.C. § 101 rejection of claim 42. *Id.*

#### **vii. *Ex Parte Barnes***

In *Ex Parte Barnes* the Board was asked to review a series of rejections including rejections under 35 U.S.C. § 102(b), § 102(a), and § 103(a). *Barnes*, Appeal No. 2007-4114, 3 (Bd.Pat.App. & Interf., 2008). While the Board

reversed these rejections, the Board additionally added a new rejection under 35 U.S.C. § 101. *Id.* at 13. In this case, exemplary claim 1 recited:

A fault identification method that comprises:  
obtaining seismic data; and  
for each of multiple positions of an analysis window in the seismic data, determining a planarity value for discontinuities in the analysis window.

*Id.* at 2.

In analyzing the claims under 35 U.S.C § 101, the Board applied the machine-or-transformation test as applied under *Bilski*. *Id.* at 12. In regards to the machine aspect of the test, the Board stated that “[a] review of the claims reveals that they call for gathering, analyzing and displaying of data without any details as to how the data is gathered, analyzed or displayed,” and, as such, “the claims neither specifically call for a machine nor reference a machine.” *Id.* Dealing with a few specific issues, the Board specifically stated, merely “adding a data-gathering step to a process claim...is insufficient to convert a process into a patent-eligible process” and “[t]he displaying of data...without more (e.g., a reference as to how and why it is displayed) is determined to be ‘insignificant postsolution activity’ and as such will not transform the claimed method into a patentable method.” *Id.*

In analyzing the transformation prong of the test, the Board stated “as the claimed method contains physical steps (gathering, analyzing and displaying) it does not involve transforming an article into a different state or thing. Accordingly, the claimed method in claims 1-19 and 30-34 failed ‘the machine-or-transformation test.’” *Id.* at 13.

### III. CONCLUSION

As is apparent from the cases and decisions rendered by the courts in the short time since *In re Bilski* was decided, the issues surrounding patentable subject matter in regards to process claims under 35 U.S.C. § 101 are far from being settled. At the time of this writing, *Bilski* has petitioned the Supreme Court for review (a decision is due after the paper deadline). One thing appears clear, unless the Supreme Court takes action, an applicant's ability to obtain, and a patent holder's ability to enforce, software patents will become much more difficult. For the short term at least, the turnover in law will create great uncertainty and large numbers of patents, including those previously upheld by courts, will be argued as invalid. Such a situation hardly seems in the best interest of promoting the progress of science and useful arts.