Patentable Subject Matter

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Agenda

- Basic Principles for Patentability
- Supreme Court Cases
- Patent Office Advice
- Our Practice Tips
- Appendix of Significant Cases

“Process”

“The term ‘process’ means process, art, or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.”

(35 U.S.C. § 100(b)).

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Exceptions to Patentable Subject Matter --"Anything under the sun is patentable"

"Congress plainly contemplated that the patent laws would be given wide scope . . . . The Committee Reports accompanying the 1952 Act inform us that ***Congress intended statutory subject matter to 'include anything under the sun that is made by man.***' S. Rep. No. 1979, 82d Cong., 2d Sess., 5 (1952); H. R. Rep. No. 1923, 82d Cong., 2d Sess., 6 (1952)."

Diamond v. Chakrabarty, 447 U.S. 303, 308-09 (1980)(emphasis added)

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Exceptions to Patentable Subject Matter --Limits to patentability

"This is not to suggest that § 101 has no limits or that it embraces every discovery. ***The laws of nature, physical phenomena, and abstract ideas have been held not patentable***. Thus, a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity. ***Such discoveries are 'manifestations of . . . nature, free to all men and reserved exclusively to none***.'"

Diamond v. Chakrabarty, 447 U.S. 303, 308-09 (1980)(emphasis added)

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Exceptions to Patentable Subject Matter --Examples

- Law of nature or physical phenomena
  - $E=mc^2$
  - Vitamin D helps grow strong bones
  - A newly discovered property of a known component
  - A new mineral discovered in the earth or a new plant found
- Abstract ideas
  - Mathematical algorithm
  - Method of reducing risk of falling down stairs
  - Send information using electric signals

Agenda

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Supreme Court Cases
Older Supreme Court Cases

Gottschalk v. Benson, 409 U.S. 63 (1972)

Held: Algorithm to convert binary-coded decimal numerals into pure binary code was not patentable.

Reasons: The patent was to an abstract idea that would prevent others from using mathematical algorithm.

Takeaway: Algorithm or formula only is not patentable.

Parker v. Flook, 437 U.S. 584 (1978)

Held: Use of mathematical formula in catalytic conversion process in oil refining was not patentable.

Reasons: Only innovation was use of mathematical formula.

Takeaway: Limiting algorithm or formula to one field is not patentable.

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

Held: Use of mathematical formula in rubber manufacture was patentable.

Reasons: Patent claimed a new method of molding rubber into products.

Takeaway: Applying algorithm or formula to innovative process is patentable.

Supreme Court Cases
Bilski v. Kappos, 130 S. Ct. 3218 (2010)

Claims-at-Issue

Methods of protecting against loss in commodities trading.

Result

Not patentable as an abstract idea.

Additional Guidance by Supreme Court

–Having a specific ***application*** for law of nature is enough.

–Adding a ***field*** of use is not enough. *Diamond v. Diehr*, 450 U. S. 175, 185 (1981).

–Federal Circuit's ***Machine or Transformation Test*** is not the exclusive test, but is helpful "clue."

–Some ***business methods*** may be patentable.

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Supreme Court Cases
Bilski v. Kappos, 130 S. Ct. 3218 (2010)

Federal Circuit's Machine or Transformation Test

Claim to a process qualifies as patent eligible if it:

(1) is implemented with a particular machine, that is, one specifically devised and adapted to carry out the process in a way that is not concededly conventional and is not trivial; or

(2) transforms an article from one thing or state to another.

Supreme Court Cases
Mayo Collaborative Servs. v. Prometheus Labs., 132 S. Ct. 1289 (2012)

Claims-at-Issue

Determining the dosage of a drug given to a patient based on a newly discovered correlation between metabolites in blood and whether a drug was helpful or harmful to a patient.

Result

Not patentable as a law of nature.

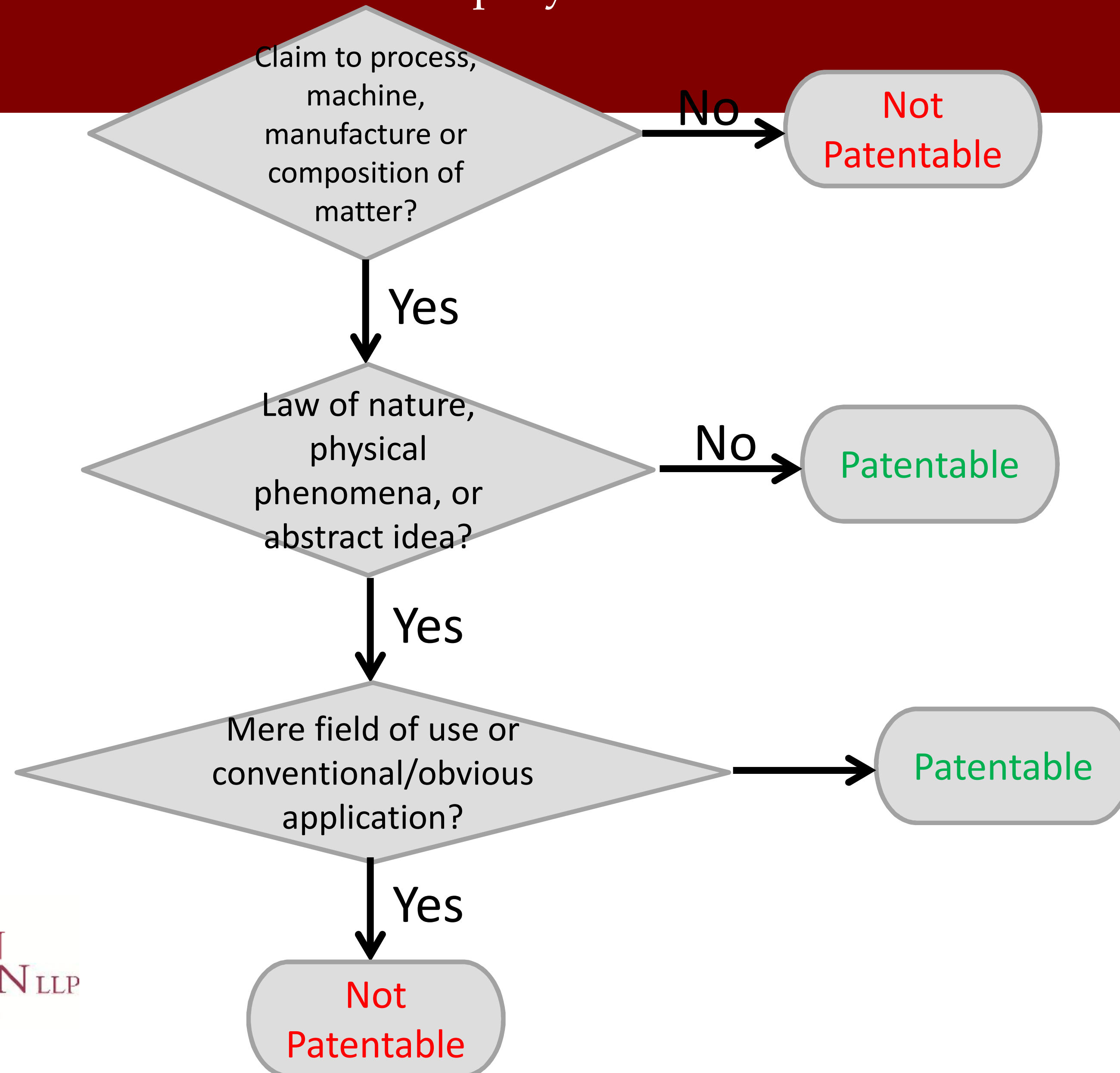
Additional Guidance by Supreme Court

–Machine or transformation test is not determinative

–Application of law of nature is patentable, but claims have to say more than "apply it"

–Must include other elements in claim that are not conventional or obvious (i.e., the elements should be meaningfully part of the invention and not just insignificant post-solution activity)

Patent-eligibility is a threshold question that turns on a three-part inquiry:



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- Patent Office Advice

USPTO's Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of *Bilski v. Kappos, 75 Fed. Reg. 43,927 (July 27, 2010)).*

Factors Weighing Toward Patent-Eligibility:

- **Recitation of a machine or transformation**
  - **Machine or transformation meaningfully limits the execution of the steps.**
  - **Machine implements the claimed steps.**
  - **The article being transformed is particularly set forth in claim.**
  - **The article undergoes a change in state or thing.**
  - **The article being transformed is an object or substance.**

- **The claim is directed toward applying a law of nature.**
  - **Law of nature is practically applied.**
  - **The application of the law of nature meaningfully limits the execution of the steps.**

- **The claim is more than a mere statement of a concept.**
  - **The claim describes a particular solution to a problem to be solved.**
  - **The claim implements a concept in some tangible way.**
  - **The performance of the steps is observable and verifiable.**

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USPTO's Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of *Bilski v. Kappos, 75 Fed. Reg. 43,927 (July 27, 2010)).*

<u>Examples of Abstract Ideas</u>

- Basic economic practices or theories (e.g., hedging, insurance, financial transactions, marketing);
- Basic legal theories (e.g., contracts, dispute resolution, rules of law);
- Mathematical concepts (e.g., algorithms, spatial relationships, geometry);
- Mental activity (e.g., forming a judgment, observation, evaluation, or opinion);
- Interpersonal interactions or relationships (e.g., conversing, dating);
- Teaching concepts (e.g., memorization, repetition);
- Human behavior (e.g., exercising, wearing clothing, following rules or instructions);
- Instructing "how business should be conducted."

USPTO's March 12, 2012 Guidance to Examiners after *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S. Ct. 1289 (2012)

- "Examiners must continue to ensure that claims, ***particularly process claims***, are not directed to an exception to eligibility such that the claim amounts to a ***monopoly on the law of nature, natural phenomenon, or abstract idea itself***."

- "In addition, to be patent-eligible, a claim that includes an exception should include other elements or combination of elements such that, in practice, the claimed product or process amounts to significantly ***more than a law of nature, a natural phenomenon, or an abstract idea with conventional steps specified at a high level of generality appended thereto***."

- "If a claim is rejected under section 101 on the basis that it is drawn to an exception, the applicant then has the opportunity to explain why the claim is not drawn solely to the exception and ***point to limitations in the claim that apply the law of nature, physical phenomena or abstract idea***."

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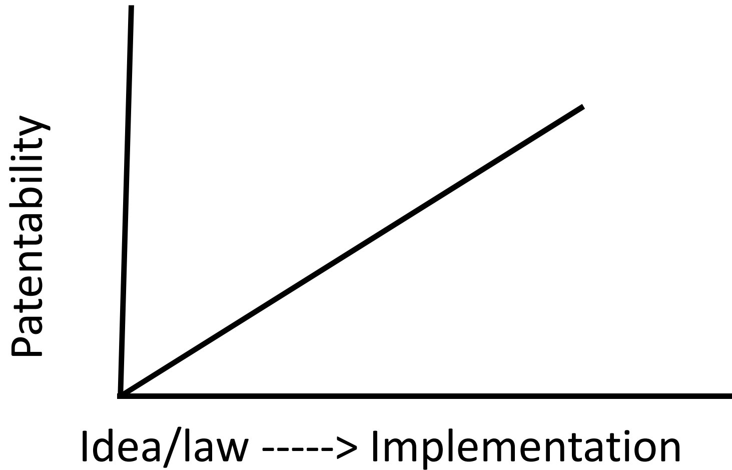
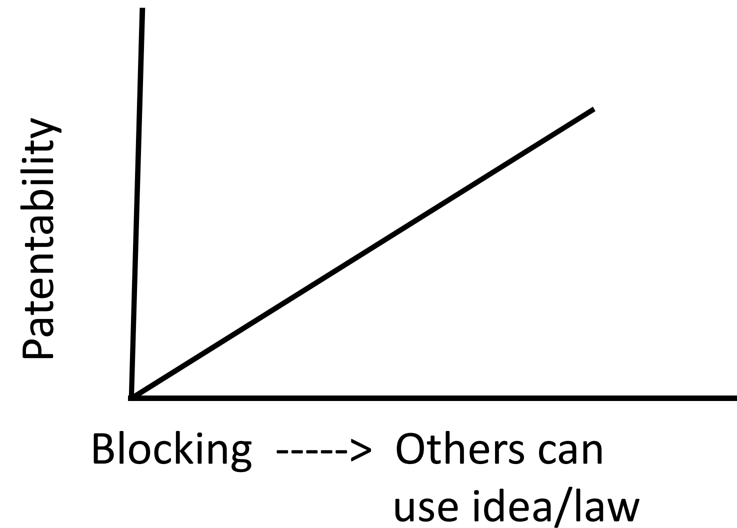
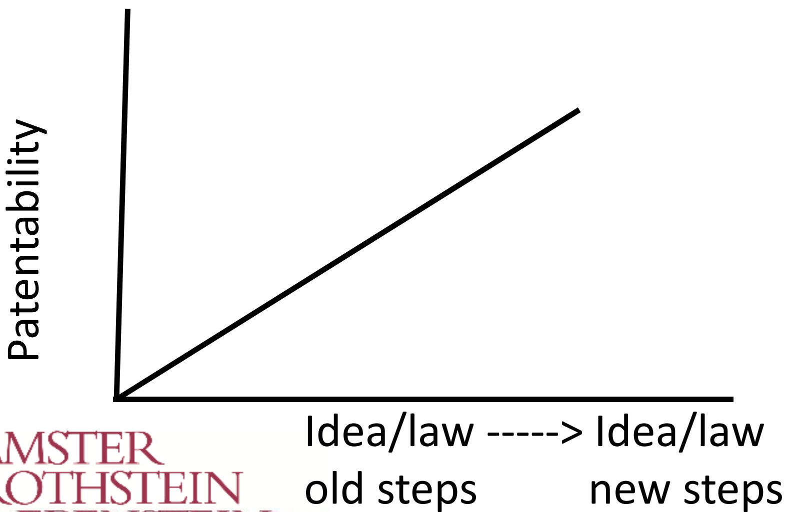
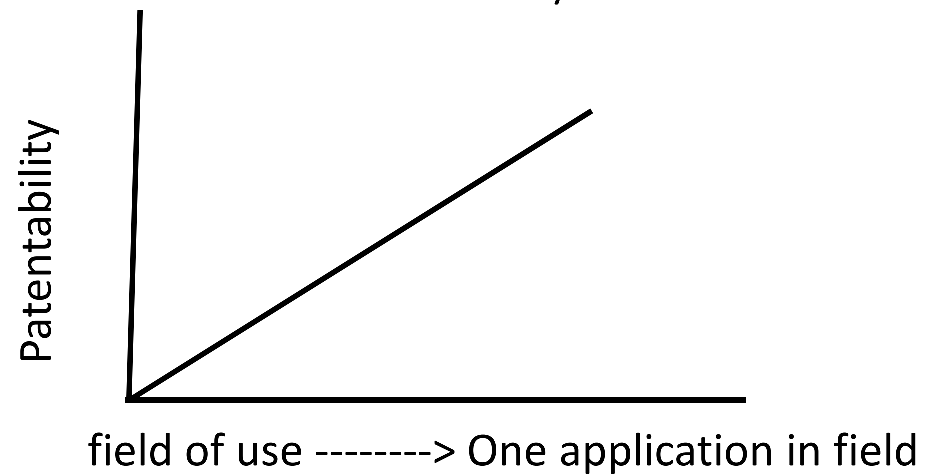
- Our Practice Tips

Strong-Weak Patentability



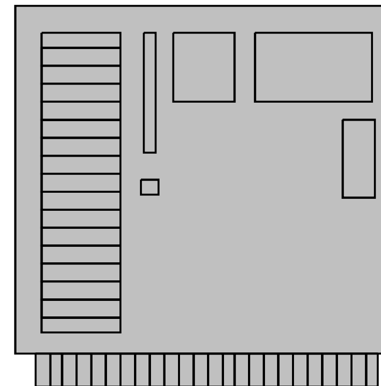






Tip # 1: Include Detailed Description of Computer or Other Machine in the Specification and Claims

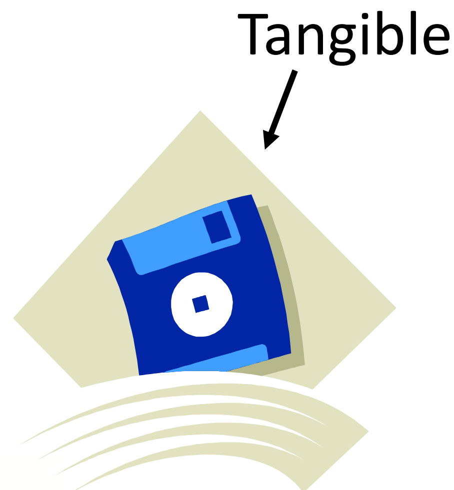
- While the Supreme Court has confirmed that the "machine or transformation" test is not the sole test (or even determinative) to determine patent-eligible subject matter, it is still an important "clue."
- A claim that merely has "computer-assisted" method in the preamble has been held not patentable. It is better to specify how the computer is involved and programmed for each claim element.



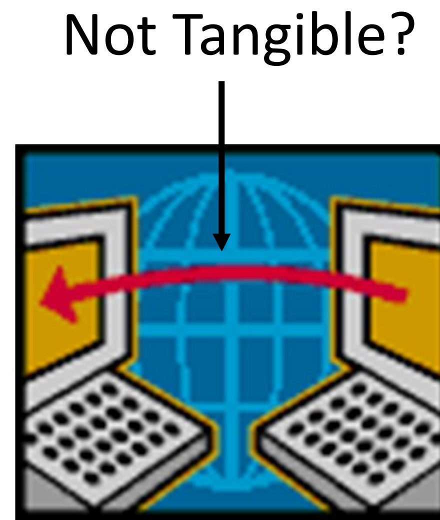
Tip # 2: Beware of Overly Broad Definitions in the Specification

- Efforts to over-broaden terms like “computer readable media” to include non tangible media can result in invalid claims. Also consider disclaiming that the invention covers a human performing the method since this could bar patentability.

Tangible



Not Tangible?



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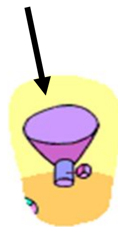
Tip # 3: Claims Should Not Be Drafted to Cover Software *Per Se*

- BPAI has rejected claims which are directed at software per se rather than as a "computer readable medium having instructions for causing a computer to execute a method . . . ."

Tangible



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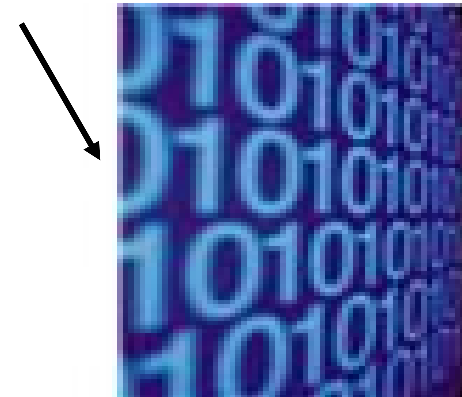

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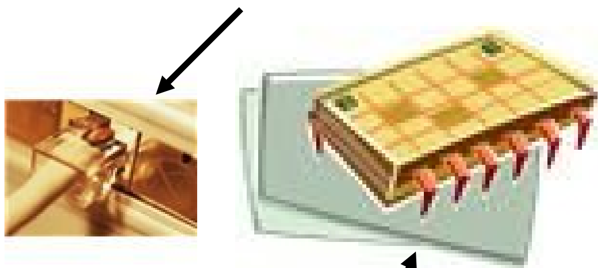
Tip # 4: Tie Steps in a Claimed Process to Particular Structures Which Perform

- To avoid being called a “general purpose computer” tie particular steps to particular structures in claims

Specific Purpose Computer

receiving data, ***via a communications portal***



analyzing data, ***using a processor***

storing data, ***on a computer readable media***

General Purpose Computer?

A ***computer-implemented*** method comprising:

receiving data

storing data

analyzing data

Tip # 5: Use Different Types of Claims

- Over the 20 year life of a patent, the law is likely to evolve so that different forms of claims should be sought

A computer-implemented method comprising:

A computer system comprising:

a communications portal, a processor, a computer readable media having instructions to cause a processor to perform the following method:

A computer-implemented method comprising:

means for:

means for:

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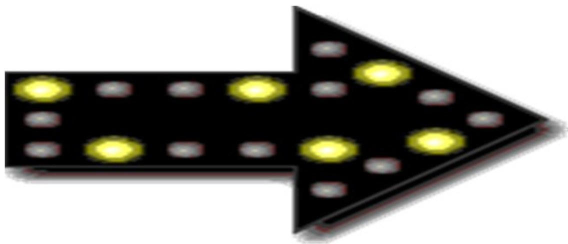
Tip # 6: Try to Show a Transformation

- PTO looks for data to be stored, accessed, processed and output from computer



Agenda

- Appendix of Significant Cases

Case Study: Claim Not Patent-Eligible: *Gottschalk v. Benson, 409 U.S. 63 (1972).*

–United States Supreme Court

8. The method of converting signals from binary coded decimal form into binary which comprises the steps of

(1) storing the binary coded decimal signals in a reentrant shift register,

(2) shifting the signals to the right by at least three places, until there is a binary "1" in the second position of said register,

(3) masking out said binary "1" in said second position of said register,

(4) adding a binary "1" to the first position of said register,

(5) shifting the signals to the left by two positions,

(6) adding a "1" to first said position, and

(7) shifting the signals to the right by at least three positions in preparation for a succeeding binary "1" in the second position of said register.

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Case Study: Claim Not Patent-Eligible: *Parker v. Flook, 437 U.S. 584 (1978).*

–United States Supreme Court

1. A method for updating the value of at least one alarm limit on at least one process variable involved in a process comprising the catalytic chemical conversion of hydrocarbons wherein said alarm limit has a current value of

Bo+K

wherein Bo is the current alarm base and K is a predetermined alarm offset which comprises:

> **(1) Determining the present value of said process variable, said present variable being defined as PVL;**
>
> **(2) Determining a new alarm base B1, using the following equation:**
>
> **B[1]=Bo(1.0<v1>minF)+PVL(F)**
>
> **where F is a predetermined number greater than zero and less than 1.0;**
>
> **(3) Determining an updated alarm limit which is defined as B1+GK; and thereafter**
>
> **(4) Adjusting said alarm limit to said updated alarm limit value.**

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Case Study: Claim Is Patent-Eligible: *Diamond v. Diehr, 450 U.S. 175 (1981).*

–United States Supreme Court

1. A method of operating a rubber-molding press for precision molded compounds with the aid of a digital computer, comprising:

providing said computer with a data base for said press including at least,

natural logarithm conversion data (ln),

the activation energy constant (C) unique to each batch of said compound being molded, and

a constant (x) dependent upon the geometry of the particular mold of the press,

initiating an interval timer in said computer upon the closure of the press for monitoring the elapsed time of said closure,

constantly determining the temperature (Z) of the mold at a location closely adjacent to the mold cavity in the press during molding,

constantly providing the computer with the temperature (Z),

repetitively calculating in the computer, at frequent intervals during each cure, the Arrhenius equation for reaction time during the cure, which is

ln v <v1>equ CZ+x

where *v* is the total required cure time,

repetitively comparing in the computer at said frequent intervals during the cure each said calculation of the total required cure time calculated with the Arrhenius equation and said elapsed time, and opening the press automatically when a said comparison indicates equivalence.

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Case Study: Claim Not Patent-Eligible: *Bilski v. Kappos, 130 S. Ct. 3218 (2010).*

–United States Supreme Court

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

(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;

(b) identifying market participants for said commodity having a counter-risk position to said consumers; and

(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

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Case Study: Claim Not Patent-Eligible: *Mayo Collaborative Servs. v. Prometheus Labs., 132 S. Ct. 1289 (2012).*

–United States Supreme Court

1. 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 having said immune-mediated gastrointestinal disorder,

wherein the level of 6-thioguanine less than about 230 pmol per 8×10^8 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 8×10^8 red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.

Case Study: Claims Are Patent-Eligible: *Research Corp. Techs. v. Microsoft Corp., 627 F.3d 859 (Fed. Cir. 2010).*

–Federal Circuit

1. A method for the halftoning of gray scale images by utilizing a pixel-by-pixel comparison of the image against a blue noise mask in which the blue noise mask is comprised of a random non-deterministic, non-white noise single valued function which is designed to produce visually pleasing dot profiles when thresholded at any level of said gray scale images.

2. The method of claim 1, wherein said blue noise mask is used to halftone a color image.

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Case Study: Claim Not Patent-Eligible: *Cybersource Corp. v. Retail Decisions, Inc., 654 F.3d 1366 (Fed. Cir. 2011).*

–Federal Circuit

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.

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Case Study: Claim Is Patent-Eligible: *Ultramercial, LLC v. Hulu, LLC, 657 F.3d 1323 (Fed. Cir. 2011).*

–Federal Circuit

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 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.

Case Study: Claim Is Patent-Eligible: *Classen Immunotherapies, Inc. v. Biogen IDEC, 659 F.3d 1057 (Fed. Cir. 2011).**

–Federal Circuit

1. A method of immunizing a mammalian subject 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),

(II) immunizing said subject according to a subject immunization schedule, according to which at least one of said infectious disease-causing organism-associated immunogens of said lower risk schedule is administered in accordance with 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.

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*Pending at Supreme Court

Case Study: Claim Not Patent-Eligible: *Classen Immunotherapies, Inc. v. Biogen IDEC, 659 F.3d 1057 (Fed. Cir. 2011).** –Federal Circuit

1. 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.

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*Pending at Supreme Court

Case Study: Claim Not Patent-Eligible: *Dealertrack, Inc. v. Huber, 101 U.S.P.Q.2d 1325 (Fed. Cir. 2012).* –Federal Circuit

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 funding 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, sending to at least one other remote funding source, until one of the funding 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 funding source if the first funding source declines to approve the credit application.

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Case Study: Claim Not Patent-Eligible: *Fort Properties, Inc. v. Am. Master Lease LLC, 671 F.3d 1317 (Fed. Cir. 2012).*

–Federal Circuit

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.

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ありがとうございました

ご質問等ございましたら、下記までお気軽に
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