

# Patent Law

Prof. Roger Ford

Monday, March 30, 2015

**Class 18 – Patentable subject matter II:  
laws of nature and abstract ideas**

## Recap

# Recap

- Overview of patentable subject matter
- Products of nature

**Today's agenda**

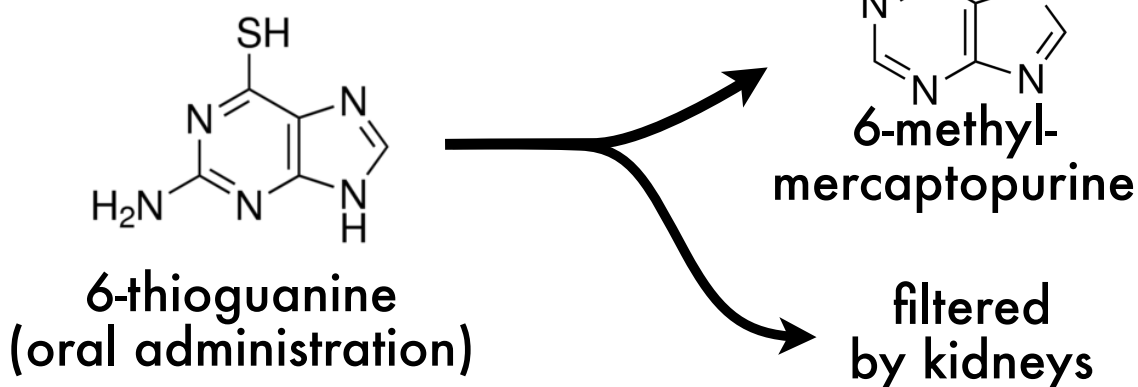
# Today's agenda

- Laws of nature
- Abstract ideas
- A unified framework

**Laws of nature**

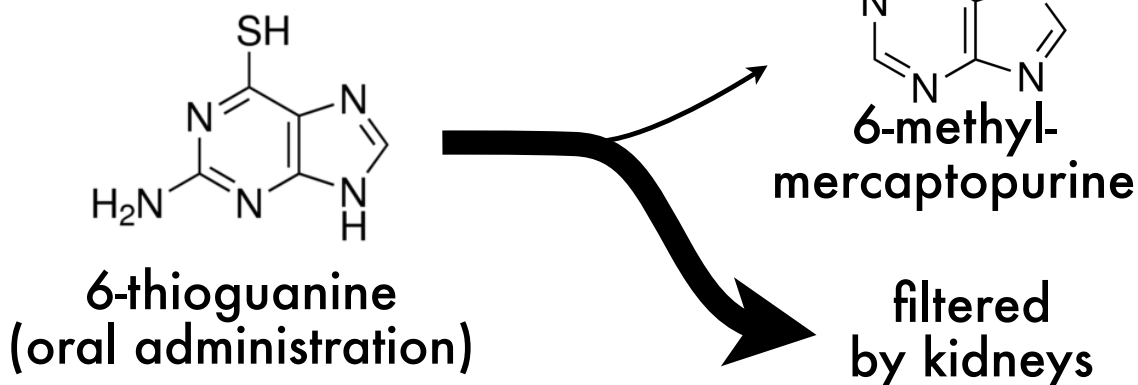
# Mayo v. Prometheus

→ Treating Crohn's disease with  
6-thioguanine



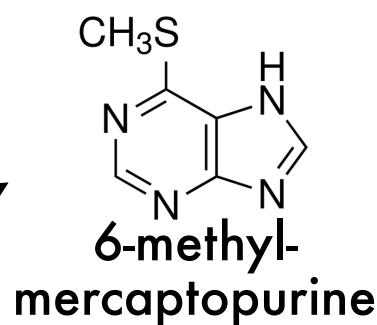
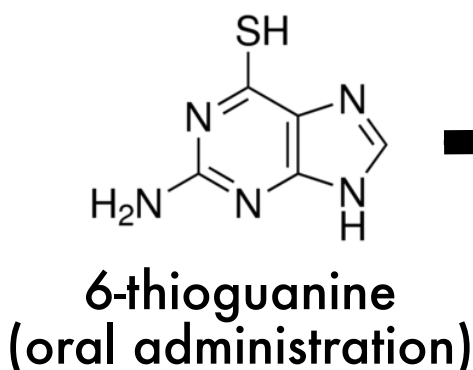
# Mayo v. Prometheus

→ Treating Crohn's disease with  
6-thioguanine



# Mayo v. Prometheus

→ Treating Crohn's disease with  
6-thioguanine



filtered  
by kidneys

(12) **United States Patent**  
Seidman et al.

(10) Patent No.: **US 6,355,623 B2**  
(45) Date of Patent: \*Mar. 12, 2002

(54) **METHOD OF TREATING IBD/CROHN'S DISEASE AND RELATED CONDITIONS WHEREIN DRUG METABOLITE LEVELS IN HOST BLOOD CELLS DETERMINE SUBSEQUENT DOSAGE**

(75) Inventors: Ernest G. Seidman, Côte St. Luc, Yves Thériault, Montreal, both of (CA)

(73) Assignee: Hôpital-Sainte-Justine, Montreal (CA)

(\*) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/288,344

(22) Filed: Apr. 8, 1999

**Related U.S. Application Data**

(60) Provisional application No. 60/101,714, filed on Sep. 24, 1998.

(51) Int. Cl.<sup>7</sup> A61K 31/70

(52) U.S. Cl. 514/45; 514/47; 514/48; 514/262; 514/391; 514/395

(58) Field of Search 514/45, 47, 48, 514/262, 391, 395

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5,733,915 A \* 3/1998 Sandborn ..... 514/262

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WO 96/30021 10/1996

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Belaché et al., "Therapeutic Drug Monitoring of Azathioprine and 6-Mercaptopurine Metabolites in Crohn Disease," *Scandinavian Journal of Gastroenterology*, 2001(1), 72-76. +††

Andersen et al., "Pharmacokinetics, dose adjustments, and 6-mercaptopurine/methotrexate drug interactions in two patients with thiopurine methyltransferase deficiency," *Acta Paediatr.*, 87:108-111.

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**Primary Examiner**—Gary Geist  
**Assistant Examiner**—L. E. Crane  
(74) **Attorney, Agent, or Firm**—Campbell & Flores LLP


**ABSTRACT**

The present invention provides a method of optimizing therapeutic efficacy and reducing toxicity associated with 6-mercaptopurine drug treatment of an immune-mediated gastrointestinal disorder such as inflammatory bowel disease. The method of the invention includes the step of determining the level of one or more 6-mercaptopurine metabolites in the patient having an immune-mediated gastrointestinal disorder.

54 Claims, 3 Drawing Sheets

## U.S. Patent No. 6,355,623

→ "Method of treating IBD/Crohn's disease and related conditions wherein drug metabolite levels in host blood cells determine subsequent dosage"



US006355623B2

(12) **United States Patent**  
Seidman et al.

(10) Patent No.: **US 6,355,623 B2**  
(45) Date of Patent: **\*Mar. 12, 2002**

(54) **METHOD OF TREATING IBD/CROHN'S DISEASE AND RELATED CONDITIONS WHEREIN DRUG METABOLITE LEVELS IN HOST BLOOD CELLS DETERMINE SUBSEQUENT DOSAGE**

(75) Inventors: Ernest G. Seidman, Côte St. Luc, Yves Thériault, Montreal, both of (C)

(73) Assignee: **Hôpital-Sainte-Justine, Mon**

(\*) Notice: This patent issued on a continuation application filed under 35 U.S.C. 111(a)(2), and is subject to the provisions of 35 U.S.C. 154(a)(2).

Subject to any disclaimer, the patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/288,344**  
(22) Filed: **Apr. 8, 1999**

**Related U.S. Application Data**  
(60) Provisional application No. 60/101,714, filed 1998.

(51) Int. Cl.<sup>7</sup> ..... A

(52) U.S. Cl. .... **514/45; 514/46; 514/262; 514/39**

(58) Field of Search ..... 514/45; 514/262

(56) **References Cited**

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Sandborn et al., "Lack of Effect of Intravenous Azathioprine on Time to Respond to Azathioprine for Steroid-Resistant Crohn's Disease," *Gastroenterology*, 117(5), 527-531 (1999).  
Belachew et al., "Therapeutic Drug Monitoring of Azathioprine and 6-Mercaptopurine Metabolites in Crohn's Disease," *Scandinavian Journal of Gastroenterology*, 2001(1), 72-76.  
†††

54 Claims, 3 Drawing Sheets

# U.S. Patent No. 6,355,623

**7. A method of reducing toxicity associated with treatment of an immune-mediated gastrointestinal disorder, comprising:**

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

wherein the level of 6-thioguanine greater than about 400 pmol per  $8 \times 10^8$  red blood cells or the level of 6-methyl-mercaptopurine greater than about 7000 pmol per  $8 \times 10^8$  red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject.

Method of IBD/disease treated with drug to determine blood level of drug

dosage

# Mayo v. Prometheus

## → History

- In *Bilski*, the Supreme Court says the "machine or transformation" test is just one clue to patentability
- Federal Circuit continues to rely heavily on that test
- Federal Circuit upholds Prometheus patent: "administering" and "determining" steps are transformative

# *Mayo v. Prometheus*

## → History

- Supreme Court takes case
- Most people expect Court to affirm Federal Circuit
- Instead, the Supreme Court reverses unanimously

# *Mayo v. Prometheus*

## → What's the rule in this case?

- The new test for patentability

# *Mayo v. Prometheus*

- What's the rule in this case?
  - The new test for patentability
  - Look at the claim and see if it sets forth a natural law
  - If so, look at the claim without the natural law and see if there's an inventive concept
  - This is our new two-step framework

# *Mayo v. Prometheus*

- Step 1: Does the claim set forth a natural law?



# *Mayo v. Prometheus*

- Step 1: Does the claim set forth a natural law?
  - “[T]he relation itself exists in principle apart from any human action” and is “a consequence of ... entirely natural processes” (page 4)

# *Mayo v. Prometheus*

- Step 2: Do the other elements add an inventive concept?

# Mayo v. Prometheus

- Step 2: Do the other elements add an inventive concept?
- “[A]ssurance that the process is more than a drafting effort designed to monopolize the law of nature itself” (page 4)
  - Additional steps can’t “consist of well-understood, routine, conventional activity” (page 6)
  - “[O]rdered combination” can’t add more than what is already present (page 6)

# Mayo v. Prometheus

- Step 2: Do the other elements add an inventive concept?
- Note: this brings novelty out of § 102 and into the § 101 inquiry
  - This is a common critique of these cases
  - Idea: If the only new thing in your patent is a natural law, it’s not patentable

# Mayo v. Prometheus

→ *Diehr* (1981) versus *Flook* (1978)

- For a long time, *Diehr* was interpreted as basically overturning *Flook*

584

OCTOBER TERM, 1977

Syllabus

437 U.S.

PARKER, ACTING COMMISSIONER OF PATENTS  
AND TRADEMARKS v. FLOOK

CERTIORARI TO THE COURT OF CUSTOMS AND PATENT APPEALS

No. 77-642. Argued April 25, 1978—Decided June 22, 1978

Respondent's method for updating alarm limits during catalytic conversion processes, in which the only novel feature is a mathematical formula, *held* not patentable under §101 of the Patent Act. The identification of a limited category of useful, though conventional, post-solution applications of such a formula does not make the method eligible for patent protection, since assuming the formula to be within prior art, as it must be, *O'Reilly v. Morse*, 15 How. 62, respondent's application contains no patentable invention. The chemical processes involved in catalytic conversion are well known, as are the monitoring of process variables, the use of alarm limits to trigger alarms, the notion that alarm limit values must be recomputed and readjusted, and the use of computers for "automatic process monitoring." Pp. 588-596.

559 F. 2d 21, reversed.

STEVENS, J., delivered the opinion of the Court, in which BRENNAN, WHITE, MARSHALL, BLACKMUN, and POWELL, JJ., joined. STEWART, J., filed a dissenting opinion, in which BURGER, C. J., and REHNQUIST, J., joined, *post*, p. 598.

*Deputy Solicitor General Wallace* argued the cause for petitioner. On the briefs were *Solicitor General McCree*, *Assistant Attorney General Shenefield*, *Richard H. Stern*, *Joseph F. Nakamura*, and *Jere W. Sears*.

*D. Dennis Allegretti* argued the cause for respondent. With him on the brief were *Charles G. Call*, *Edward W. Remus*, and *Frank J. Uza, Jr.*\*

\**John S. Voorhees* and *Kenneth E. Krosin* filed a brief for the Computer Business Equipment Manufacturers Assn. as *amicus curiae* urging reversal.

Briefs of *amici curiae* urging affirmance were filed by *Carol A. Cohen* for Applied Data Research, Inc.; and by *Morton C. Jacobs* and *David Cohen* for the Association of Data Processing Service Organizations.

Briefs of *amici curiae* were filed by *James W. Geriak* for the American

## Parker v. Flook (1978)

→ *In re Application of Flook*

PARKER, ACTING COMMISSIONER OF PATENTS  
AND TRADEMARKS v. FLOOK

CERTIORARI TO THE COURT OF CUSTOMS AND PATENT APPEALS

No. 77-642. Argued April 26, 1978.

Respondent's method for updating alarm limit values in a process, in which the formula, held not patentable, identified a limited class of solution applications of such type as to be suitable for patent protection, significant, as it must be, *O'Reilly* contains no patentable subject matter. In catalytic conversion are variables, the use of alarm limit values must be determined by computers for "automatic" process control. 559 F.2d 21, reversed.

STEVENS, J., delivered the opinion. WHITE, MARSHALL, BLACKMUN, BRENNAN, and STEVENS filed a dissenting opinion, in which BRENNAN and STEVENS joined, *post*, p. 598.

Deputy Solicitor General. On the briefs were Assistant Attorney General Shoji Nakamura, and Jere W. ...

D. Dennis Allegretti argued for him on the brief were Charles Frank J. Uza, Jr.\*

\*John S. Voorhees and Kenneth Business Equipment Manufacturers. Briefs of amici curiae urging reversal were filed for Applied Data Research, Inc., by ... Cohen for the Association of ... Briefs of amici curiae were filed by James W. Geriak for the American ...

# Parker v. Flook (1978)

Claim 1 of the patent describes the method as follows:

"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 value being defined as PVL;

"(2) Determining a new alarm base B<sub>1</sub>, using the following equation:

$$B_1 = Bo(1.0 - F) + PVL(F)$$

"where F is a predetermined number greater than zero and less than 1.0;

"(3) Determining an updated alarm limit which is defined as B<sub>1</sub> + K; and thereafter

"(4) Adjusting said alarm limit to said updated alarm limit value." App. 63A.

Application

include all processes up to the introduction of the kiln feed into the kiln, "but not ... any subsequent process." The regulations recognize that storage, distribution, and sales are "subsequent process[es]," and we find the regulations reasonable. 26 CFR 1.174 § 1.613-4(d)(3)(iii) (1980) (storage and distribution); §§ 1.613-4(d)(3)(iv) and 1.613-5(c)(4)(ii) (sales). These regulations allow a different treatment only for sales expenses. See *supra*, at 1045. Respondent, who bore the burden of proof in the Tax Court, made no showing to warrant treating sales expenses as anything but nonmining costs.<sup>22</sup>

#### IV

[7] In sum, the Treasury Regulations defining first marketable product, and those prescribing the treatment of the costs of bags, bagging, storage, distribution, and sales, dictate the result in this case. To be sure, the proportionate profits method can only approximate gross income from mining. The Commissioner does not contend that the method does more than approximate. But an approximation must suffice absent an actual gross income from mining, and respondent concedes that the proportionate profits method is a reasonable means of approximating. The method also is a means that respondent accepted, as it did not seek the Commissioner's approval of any other method.<sup>23</sup> Accordingly, respondent must apply the method as prescribed by the Commissioner.

The judgment of the Court of Appeals is reversed.

It is so ordered.



22. Respondent relies upon decisions which hold that an integrated minor-manufacturer may allocate sales expenses between mining and nonmining costs. E.g., *United States v. California Portland Cement Co.*, 413 F.2d, at 170-172. These cases were decided before the issuance in 1972 of Treas.Regs. §§ 1.613-4(d)(3)(iv) and 1.613-5(c)(4)(ii). Prior to 1972, no regulations answered the question whether selling ex-

450 U.S. 175, 67 L.Ed.2d 155  
Sidney A. DIAMOND, Commissioner of  
Patents and Trademarks, Petitioner,

v.  
James R. DIEHR, II and Theodore  
A. Lutton.

No. 79-1112.

Argued Oct. 14, 1980.  
Decided March 3, 1981.

Patent applicant appealed from decision of Patent and Trademark Office Board of Appeals, Serial No. 602,463, rejecting claims for process for curing synthetic rubber. The Court of Customs and Patent Appeals, Rich, J., 602 F.2d 982, reversed. Certiorari was granted. The Supreme Court, Mr. Justice Rehnquist, held that: (1) although by itself a mathematical formula is not subject to patent protection, when a claim containing such formula implements or applies it in a structure or process which considered as a whole is performing a function designed to be protected by the patent laws the claim constitutes patentable subject matter; (2) subject process constituted patentable subject matter notwithstanding that in several of its steps it included use of a mathematical formula and a programmed digital computer, as process involved transformation of uncured synthetic rubber into a different state or thing and solved an industry problem of "undercure" and "overcure"; and (3) fact that by themselves one or more steps might not be novel or independently eligible for patent protection was irrelevant to issue of whether the claims as

penses were nonmining costs or allocable between mining and nonmining costs. The 1972 regulations assume, on the basis of the statutory definition of "mining," that they are nonmining costs. Nonetheless, the integrated minor-manufacturer may show otherwise.

23. See *supra*, at 1041, and n. 6.

# Diamond v. Diehr (1981)

→ In re  
Application  
of Diehr

include all processes up to the introduction of the kiln feed into the kiln, "but not . . . any subsequent process." The regulations recognize that storage, distribution, and sales are "subsequent process[es]," and we find the regulations reasonable. 26 CFR 1.1613-4(d)(3)(iii) (1980) (storage and distribution); §§ 1.613-4(d)(3)(iv) and 1.613-5(c)(4)(ii) (sales). These regulations allow a different treatment only for sales expenses. See *supra*, at 1045. Respondent, who bore the burden of proof in the Tax Court, made no showing to warrant treating sales expenses as anything but nonmining costs.<sup>22</sup>

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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 = 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.

# Diamond v. Diehr (1981)

re application Diehr

## Mayo v. Prometheus

→ Diehr (1981) versus Flook (1978)

- So what's the difference?

# Mayo v. Prometheus

→ *Diehr* (1981) versus *Flook* (1978)

- So what's the difference?
- *Diehr*: "the additional steps of the process integrated the equation into the process as a whole" and were "an inventive application of the formula" (page 7)
- *Flook*: "doing nothing other than" providing a new formula, with other, conventional steps (page 7)

# Mayo v. Prometheus

→ What policy concerns drive the Court?

# *Mayo v. Prometheus*

- What policy concerns drive the Court?
  - Laws of nature, natural phenomena, abstract ideas: all have preemptive effect
  - Are the basic building blocks of scientific inquiry
  - Are too broad, and would block too much other work

# *Mayo v. Prometheus*

- Back to the patent bargain
  - Inventor contributes invention to society
  - Society gives limited monopoly
  - But here the monopoly is, the Court thinks, too great a cost

# *Mayo v. Prometheus*

→ Is this argument persuasive?

# *Mayo v. Prometheus*

→ Is this argument persuasive?

- Scientific principles are really valuable – maybe we want to encourage people to discover them
- And the monopoly is limited
- And, this is a narrow law!
- But maybe it's impossible to avoid a scientific law once you know it exists



# Mayo v. Prometheus

## → What about the claim in *Rosaire*?

The method of detecting subterranean deposits from which leakage of emanations occur which comprises taking soil samples from selected points in a predetermined area, confining the respective soil samples from air contamination, removing said samples from confinement, and analyzing the samples with respect to gases contained in the samples directly related to said deposits.

# Mayo v. Prometheus

## → What about the claim in *Rosaire*?

- Step 1: Does it implicate a natural law?

# Mayo v. Prometheus

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# Mayo v. Prometheus

## → What about the claim in *Rosaire*?

- Step 1: Does it implicate a natural law?
- Natural law: There is a correlation between soil that contains hydrocarbons and soil from areas with oil reserves

# Mayo v. Prometheus

→ What about the claim in *Rosaire*?

- Step 1: Does it implicate a natural law?
- Step 2: If so, do the other elements add an inventive concept?

# Mayo v. Prometheus

→ What about the claim in *Rosaire*?

The method of detecting subterranean deposits from which leakage of emanations occur which comprises taking soil samples from selected points in a predetermined area,

confining the respective soil samples from air contamination,

removing said samples from confinement, and


analyzing the samples with respect to gases contained in the samples directly related to said deposits.

# Mayo v. Prometheus

→ What about the claim in *Rosaire*?

- Step 1: Does it implicate a natural law?
- Step 2: If so, do the other elements add an inventive concept?
- They add sampling, containing, removing, analyzing steps – standard procedure today; probably standard in 1940?

**Abstract ideas**



US005970479A

**United States Patent** [19] **Patent Number:** **5,970,479**  
**Shepherd** [45] **Date of Patent:** **Oct. 19, 1999**

[54] **METHODS AND APPARATUS RELATING TO THE FORMULATION AND TRADING OF RISK MANAGEMENT CONTRACTS**

[75] **Inventor:** Ian K. Shepherd, Toorak, Australia

[73] **Assignees:** Swycho Infrastructure Services Pty. Ltd., Melbourne, Australia; Swycho Support Services Pty. Ltd., Sydney, Australia

[21] **Appl. No.:** 08/070,136

[22] **Filed:** May 28, 1993

[30] **Foreign Application Priority Data**  
 May 29, 1992 [AU] Australia ..... PL 2677  
 Jun. 30, 1992 [AU] Australia ..... PL 3216

[51] **Int. Cl.** ..... G06F 17/60

[52] **U.S. Cl.** ..... 705/37; 705/4

[58] **Field of Search** ..... 364/408; 705/4; 705/37

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(List continued on next page.)

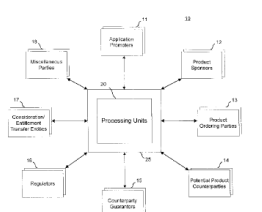
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 0 512 702 A2 11/1992 European Pat. Off.  
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 2180380 11/1989 United Kingdom  
 WO 90/11571 10/1990 WIPO  
 91/14231 9/1991 WIPO  
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 Murphy, "Soffex Well-Established After First Six Months," *Business Briefing* published by Reuters News Service, Nov. 16, 1988.

(List continued on next page.)


**ABSTRACT**  
 Methods and apparatus which deal with the management of risk relating to specified, yet unknown, future events are disclosed.  
 "Sponsor" stakeholders specify a particular product relating to an event or phenomenon for which there is a range of possible future outcomes.  
 "Ordering" stakeholders then offer contracts relating to the predetermined phenomenon and corresponding range of outcomes. The offered contracts specify an entitlement or (pay-off) at the future time of maturity for each outcome, and a consideration (or premium) payable, in exchange, to a "counter-party" stakeholder.  
 Independently of the offered contracts, the "counter-party" stakeholders input data as to their view of the likelihood of occurrence of each outcome in the predetermined range into the future, or specifically at the predetermined date of maturity.  
 Each offered contract is priced by calculating counter-party premiums from the registered data, and a match attempted by a comparison of the offered premium with the calculated premiums.  
 Matched contracts can be further traded until maturity, and a maturity processing handles the exchange of entitlement as between the matched parties to the contract.

**39 Claims, 101 Drawing Sheets**



# U.S. Patent No. 5,970,479

→ "Method and apparatus relating to the formulation and trading of risk management contracts"



US005970479A

**United States Patent** [19] **Patent Number:** **5,970,479**  
**Shepherd** [45] **Date of Patent:** **Oct. 19, 1999**

[54] **METHODS AND APPARATUS RELATING TO THE FORMULATION AND TRADING OF RISK MANAGEMENT CONTRACTS**

[75] **Inventor:** Ian K. Shepherd, Toorak, Australia

[73] **Assignees:** Swycho Infrastructure Services Pty. Ltd., Melbourne, Australia; Swycho Support Services Pty. Ltd., Sydney, Australia

[21] **Appl. No.:** 08/070,136

[22] **Filed:** May 28, 1993

[30] **Foreign Application Priority Data**  
 May 29, 1992 [AU] Australia ..... PL 2677  
 Jun. 30, 1992 [AU] Australia ..... PL 3216

[51] **Int. Cl.** ..... G06F 17/60

[52] **U.S. Cl.** ..... 705/37; 705/4

[58] **Field of Search** ..... 364/408; 705/4; 705/37

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 1 489 573 10/1977 United Kingdom  
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 WO 93/15467 8/1993 WIPO  
 WO 94/20912 9/1994 WIPO

**16. A system to enable the formulation of customized multi-party risk management contracts, the system comprising:**

a plurality of main data processing devices interconnected by at least one data communications link, each said data processing device running an operating system and applications software;

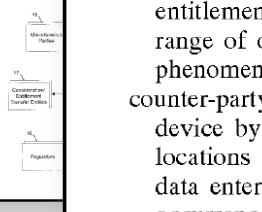
one or more data storage devices to which each data processing device has access;

a plurality of data input/output channels providing connection to a plurality of stakeholder locations, each said location having data processing means, and the system being programmed for:

receiving input of data, specifying a risk phenomenon, a range of outcomes for the phenomenon, and a time of maturity;

stakeholders inputting to a said data storage device by ones of the stakeholder data processing locations contract data for an offered contract, specifying an entitlement due at maturity for each outcome in the range of outcomes for a one of the predetermined phenomena, and an amount payable to a seller;

counter-party stakeholders inputting to a data storage device by ones of the stakeholder data processing locations registering data, independent of contract data entered by stakeholders, as to a likelihood of occurrence of each outcome in the range of outcomes



# U.S. Patent No. 5,970,479

Method and apparatus relating to the formulation and trading of risk management contracts"

# Alice Corp. v. CLS Bank

→ What's the rule in this case?

# Alice Corp. v. CLS Bank

→ What's the rule in this case?

- Takes the *Myriad* framework (pp 4–5)
- Look at the claim and see if it sets forth ~~a natural law~~ an abstract idea
- If so, look at the claim without the ~~natural law~~ abstract idea and see if there's an inventive concept
- This is our ~~new~~ now-unified two-step framework

# *Alice Corp. v. CLS Bank*

→ How do we tell if something is an abstract idea?

# *Alice Corp. v. CLS Bank*


→ How do we tell if something is an abstract idea?

- “fundamental economic practice long prevalent in our system of commerce” (page 5)
- “building block of the modern economy” (page 6)
- not a “preexisting, fundamental truth that exists in principle apart from any human action” (page 6)

# Alice Corp. v. CLS Bank

→ How do we tell if something is an abstract idea?

- But the reality is, it's hard to know  
— courts will be sorting this out for a while

  
US007346545B2

(12) **United States Patent**  
**Jones**

(10) **Patent No.:** US 7,346,545 B2  
(45) **Date of Patent:** Mar. 18, 2008

(54) **METHOD AND SYSTEM FOR PAYMENT OF INTELLECTUAL PROPERTY ROYALTIES BY INTERPOSED SPONSOR ON BEHALF OF CONSUMER OVER A TELECOMMUNICATIONS NETWORK**

(75) **Inventor:** Dana Howard Jones, Rancho Palos Verdes, CA (US)

(73) **Assignee:** Ultramercial, Inc., Palo Verdes, CA (US)

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 624 days.

(21) **Appl. No.:** 09/867,181

(22) **Filed:** May 29, 2001

(65) **Prior Publication Data**  
US 2001/0047338 A1 Nov. 29, 2001

**Related U.S. Application Data**

(60) **Provisional application No. 60/207,941, filed on May 27, 2000.**

(51) **Int. Cl.**  
**G06Q 30/00** (2006.01)

(52) **U.S. Cl.** ..... 705/26; 705/27

(58) **Field of Classification Search** ..... 705/26-27  
See application file for complete search history.

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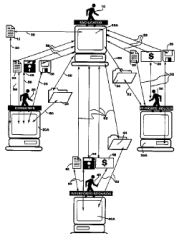
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**Primary Examiner**—Robert M. Pond  
(74) **Attorney, Agent, or Firm**—Morrison & Foerster LLP

(57) **ABSTRACT**  
The present invention is directed to a method and system for distributing or obtaining products covered by intellectual property over a telecommunications network whereby a consumer may, rather paying for the products, choose to receive such products after viewing and/or interacting with an interposed sponsor's or advertiser's message, wherein the interposed sponsor or advertiser may pay the owner or assignee of the underlying intellectual property associated with the product through an intermediary such as a facilitator.

16 Claims, 3 Drawing Sheets



## U.S. Patent No. 7,346,545

→ “Method and system for payment of intellectual property royalties by interposed sponsor on behalf of consumer over a telecommunications network”

→ Federal Circuit:  
*Ultramercial v. Hulu*





US007346545B2

(12) **United States Patent**  
Jones

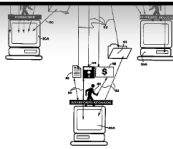
(10) Patent No.: US 7,346,545 B2  
(45) Date of Patent: Mar. 18, 2008

# U.S. Patent No. 7 346 545

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

- a first step of providing a product list on an Internet website, wherein at least some of the products are media products covered by intellectual property rights protection and are available for purchase, said media products being provided by content providers, wherein each said media product is comprised of at least one of text data, sound data, and video data;
- a second step of selecting a sponsor message to be associated with at least one of said media products, 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 restricting general public access to said media products;
- a fourth step of offering to a consumer access to a requested media product available for purchase without charge to the consumer on the precondition that the

- consumer views the sponsor message;
- a fifth step of receiving from the consumer a request to view a sponsor message in response to said step of offering;
- a sixth step of facilitating the display of a sponsor message to the consumer in response to receiving the request;
- a seventh step of, if the sponsor message is not an interactive message, allowing said consumer access to said requested media product after said step of facilitating the display of said sponsor message;
- an eighth 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 ninth step of recording the transaction event to the activity log, said ninth step including updating the total number of times the sponsor message has been presented; and
- a tenth step of receiving payment from the sponsor of the sponsor message displayed.


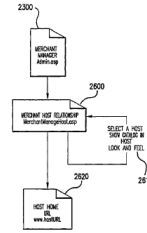


## Ultramercial v. Hulu

# Ultramercial v. Hulu

“This ordered combination of steps recites an abstraction—an idea, having no particular concrete or tangible form. The process of receiving copyrighted media, selecting an ad, offering the media in exchange for watching the selected ad, displaying the ad, allowing the consumer access to the media, and receiving payment from the sponsor of the ad all describe an abstract idea, devoid of a concrete or tangible application. Although certain additional limitations, such as consulting an activity log, add a degree of particularity, the concept embodied by the majority of the limitations describes only the abstract idea of showing an advertisement before delivering free content.”


*Ultramercial v. Hulu*, No. 2010-1544 (Fed. Cir. Nov. 14, 2014)

 US007818399B1	
<b>(12) United States Patent</b> <b>Ross, Jr. et al.</b>	
<b>(10) Patent No.: US 7,818,399 B1</b> <b>(45) Date of Patent: Oct. 19, 2010</b>	
<b>(54) METHODS OF EXPANDING COMMERCIAL OPPORTUNITIES FOR INTERNET WEBSITES THROUGH COORDINATED OFFSITE MARKETING</b>	
5,515,270 A 5/1996 Weinblatt ..... 705/14 5,537,314 A 7/1996 Kanter ..... 705/14 (Continued)	
FOREIGN PATENT DOCUMENTS WO WO 98/20434 A2 * 5/1998 OTHER PUBLICATIONS PCT International Search Report PCT/US99/21656 dated Jan. 25, 2000.	
(73) Assignee: <b>DDR Holdings, LLC</b> , Dunwoody, GA (US) (74) Attorney, Agent, or Firm: <b>Patrice L. Winder</b> (74) <b>Louis J. Hoffman</b>	
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1007 days.	
(21) Appl. No.: <b>11/743,464</b> (22) Filed: <b>Jan. 30, 2006</b>	
<b>Related U.S. Application Data</b> (65) Continuation of application No. 10/461,997, filed on Jan. 11, 2003, now Pat. No. 6,903,572, which is a continuation of application No. 09/398,268, filed on Sep. 17, 1999, now Pat. No. 6,629,135. (60) Provisional application No. 60/100,697, filed on Sep. 17, 1998.	
(51) <b>Int. Cl.</b> <b>G06F 15/16</b> (2006.01) (52) <b>U.S. Cl.</b> <b>709/218; 709/215</b> (58) <b>Field of Classification Search</b> ..... None See application file for complete search history.	
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<b>26 Claims, 24 Drawing Sheets</b>	
	

# U.S. Patent No. 7,818,399

→ “Methods of expanding commercial opportunities for internet websites through coordinated offsite marketing”

→ Federal Circuit: *DDR Holdings v. Hotels.com*

 US007818399B1	
<b>(12) United States Patent</b> <b>Ross, Jr. et al.</b>	
<b>(10) Patent No.: US 7,818,399 B1</b> <b>(45) Date of Patent: Oct. 19, 2010</b>	
<b>(54) METHODS OF EXPANDING COMMERCIAL OPPORTUNITIES FOR INTERNET WEBSITES THROUGH COORDINATED OFFSITE MARKETING</b>	
5,515,270 A 5/1996 Weinblatt ..... 705/14 5,537,314 A 7/1996 Kanter ..... 705/14 (Continued)	
FOREIGN PATENT DOCUMENTS WO WO 98/20434 A2 * 5/1998	
(75) Inventors: <b>D. Delano Ross, Jr.</b> , Alpharetta, GA (US); <b>Daniel D. Ross</b> , Dunwoody, GA (US); <b>William R. May</b> , Atlanta, GA (US); <b>Richard A. Anderson</b> , Powder Springs, GA (US)	

# U.S. Patent No. 7,818,399

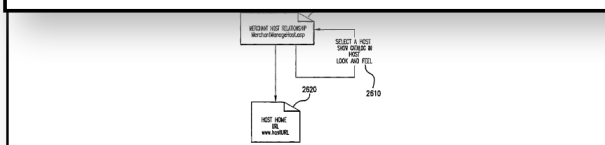
→ “Methods of

19. A system useful in an outsource provider serving web pages offering commercial opportunities, the system comprising:

- (a) a computer store containing data, for each of a plurality of first web pages, defining a plurality of visually perceptible elements, which visually perceptible elements correspond to the plurality of first web pages;
  - (i) wherein each of the first web pages belongs to one of a plurality of web page owners;
  - (ii) wherein each of the first web pages displays at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants; and
  - (iii) wherein the selected merchant, the outsource provider, and the owner of the first web page displaying the associated link are each third parties with respect to one other;

(b) a computer server at the outsource provider, which computer server is coupled to the computer store and programmed to:

- (i) receive from the web browser of a computer user a signal indicating activation of one of the links displayed by one of the first web pages;
- (ii) automatically identify as the source page the one of the first web pages on which the link has been activated;
- (iii) in response to identification of the source page, automatically retrieve the stored data corresponding to the source page; and
- (iv) using the data retrieved, automatically generate and transmit to the web browser a second web page that displays: (A) information associated with the commerce object associated with the link that has been activated, and (B) the plurality of visually perceptible elements visually corresponding to the source page.



**DDR Holdings v. Hotels.com**

# DDR Holdings v. Hotels.com

“[T]he ’399 patent’s asserted claims do not recite a mathematical algorithm. Nor do they recite a fundamental economic or longstanding commercial practice. Although the claims address a business challenge (retaining website visitors), it is a challenge particular to the Internet. \* \* \*

“[T]hese claims stand apart because they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.”

*DDR Holdings v. Hotels.com*, No. 2013-1505 (Fed. Cir. Dec. 5, 2014)

# DDR Holdings v. Hotels.com

“The ’399 patent’s claims are different enough in substance from those in *Ultramercial* because they do not broadly and generically claim ‘use of the Internet’ to perform an abstract business practice (with insignificant added activity). Unlike the claims in *Ultramercial*, the claims at issue here specify how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink. \* \* \* When the limitations of the ’399 patent’s asserted claims are taken together as an ordered combination, the claims recite an invention that is not merely the routine or conventional use of the Internet.”

*DDR Holdings v. Hotels.com*, No. 2013-1505 (Fed. Cir. Dec. 5, 2014)

# Alice Corp. v. CLS Bank

## → Practical effect

- Since Alice, many software and business-method patents have been invalidated under § 101
- Many have been invalidated on motions to dismiss
- Would you rather win on § 101 or § 102/103?

**A unified  
framework**

# A unified framework

→ Before:

- 1. Does a patent claim a “process, machine, manufacture, or composition of matter”?
- 2. If so, does it fall within an exception for laws of nature, natural phenomena, or abstract ideas?

# A unified framework

→ Before:

- 1. Does a patent claim a “process, machine, manufacture, or composition of matter”?
- 2. If so, does it fall within an exception for laws of nature, natural phenomena, or abstract ideas?

# A unified framework

→ Now:

- 1. Does a patent claim a “process, machine, manufacture, or composition of matter”?
- 2. If so, does it set forth a law of nature, natural phenomenon, or abstract idea?
- 3. If so, do the other elements of the claim add an inventive concept?



Next time

# Next time

- Infringement: claim construction and literal infringement