

Patent Law

Prof. Roger Ford
Monday, November 20, 2017
Class 23 – Remedies: Injunctive Relief

Recap

Recap

- § 271(a) and international activity
- § 271(f) and export activity
- § 271(g) and import activity

Today's agenda

Today's agenda

- Remedies background
- Preliminary injunctions
- Permanent injunctions

**Remedies
background**

Remedies background

- Two basic remedies:
 - Damages
 - Injunctions
- And added remedies for special cases:
 - Increased damages
 - Attorney fees

(post-AIA) 35 U.S.C. § 281 — Remedy for infringement of patent

A patentee shall have **remedy by civil action** for infringement of his patent.

(post-AIA) 35 U.S.C. § 283 — Injunction

The several courts having jurisdiction of cases under this title **may grant injunctions** in accordance with the **principles of equity** to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.

(post-AIA) 35 U.S.C. § 284 — Damages

Upon finding for the claimant the court shall award the claimant **damages adequate to compensate for the infringement**, but in no event less than a **reasonable royalty** for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

When the damages are not found by a jury, the court shall assess them. In either event the court **may increase the damages up to three times the amount found** or assessed. Increased damages under this paragraph shall not apply to provisional rights under section 154(d).

The court may receive **expert testimony** as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.

(post-AIA) 35 U.S.C. § 285 — Attorney fees

The court in **exceptional cases** may award **reasonable attorney fees** to the prevailing party.

Remedies background

- Damages
 - Reasonable royalty
 - Lost profits
- Injunctive relief
 - Preliminary
 - Permanent

Remedies background

- Increased damages
 - Willfulness
- Attorney fees
 - Litigation misconduct
 - Bad-faith litigation
 - Baselessness
 - Other reasons in the district court's discretion

Remedies background

→ Permanent injunctions

- Historically, almost **automatic**
- Not just a Federal Circuit innovation – that was the rule almost from the beginning of the patent system
- Patents are a type of **property**: one of the exclusive rights is the right to exclude

**Preliminary
injunctions**

Preliminary injunctions

- Patent litigation takes a **long time**
- Patents give a right to exclude
- So sometimes the court will enforce that right to exclude while the litigation is still pending



US05960411A

United States Patent [19] [11] **Patent Number:** **5,960,411**
Hartman et al. [45] **Date of Patent:** **Sep. 28, 1999**

[54] **METHOD AND SYSTEM FOR PLACING A PURCHASE ORDER VIA A COMMUNICATIONS NETWORK**
 [75] Inventors: **Peri Hartman, Jeffrey P. Bezos, Shel Kaplan, Joel Spiegel**, all of Seattle, Wash.
 [73] Assignee: **Amazon.com, Inc.**, Seattle, Wash.
 [21] Appl. No.: **08/928,951**
 [22] Filed: **Sep. 12, 1997**
 [51] **Int. Cl.**⁷ **G06F 17/60**
 [52] **U.S. Cl.** **705/26, 705/27, 345/962**
 [58] **Field of Search** **705/26, 27, 380/24, 380/25, 235/2, 375, 378, 381, 395/188.01, 345/962**

(List continued on next page.)

Primary Examiner—James P. Trammell
Assistant Examiner—Demetra R. Smith
Attorney, Agent, or Firm—Perkins Coie LLP

[57] **ABSTRACT**
 A method and system for placing an order to purchase an item via the Internet. The order is placed by a purchaser at a client system and received by a server system. The server system receives purchaser information including identification of the purchaser, payment information, and shipment information from the client system. The server system then assigns a client identifier to the client system and associates the assigned client identifier with the received purchaser information. The server system sends to the client system the assigned client identifier and an HTML document identifying the item and including an order button. The client system receives and stores the assigned client identifier and receives and displays the HTML document. In response to the selection of the order button, the client system sends to the server system a request to purchase the identified item. The server system receives the request and combines the purchaser information associated with the client identifier of the client system to generate an order to purchase the item in accordance with the billing and shipment information whereby the purchaser effects the ordering of the product by selection of the order button.

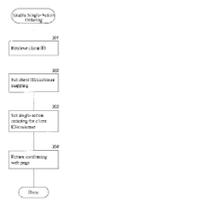
26 Claims, 11 Drawing Sheets

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WO 95/30961	11/1995	WIPO	G06F 17/60
WO 96/08799	12/1996	WIPO	G06F 17/60
WO 98/21679	5/1998	WIPO	G06F 17/60

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Jones, Chris. "Java Shopping Cart and Java Wallet; Oraclec plans to join e-commerce initiative." Mar. 31, 1997, Info-World Media Group.



U.S. Patent No. 5,960,411

→ "Method and system for placing a purchase order via a communications network"

United States Patent [19] Patent Number: 5,960,411
Hartman et al. [45] Date of Patent: Sep. 28, 1999

[54] METHOD AND SYSTEM FOR PLACING A PURCHASE ORDER VIA A COMMUNICATIONS NETWORK
[75] Inventors: Peri Hartman, Jeffrey P. Bezos, Shel Kaplan, Joel Spiegel, all of Seattle, Wash.
[73] Assignee: Amazon.com, Inc., Seattle, Wash.
[21] Appl. No.: 08/928,951
[22] Filed: Sep. 12, 1997
[51] Int. Cl.⁶ G06F 17/60

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U.S. Patent No. 5,960,411

→ "Method and

US PATENT DOCUMENTS

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OTHER PUBLICATIONS
Jones, Chris. "Java Shopping Cart and Java Wallet; Oracles plans to join e-commerce initiative." Mar. 31, 1997, Info-World Media Group.



U.S. Patent No. 5,960,411

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[54] METHOD AND SYSTEM FOR PLACING A PURCHASE ORDER VIA A COMMUNICATIONS NETWORK
[75] Inventors: Peri Hartman, Jeffrey P. Bezos, Shel Kaplan, Joel Spiegel, all of Seattle, Wash.
[73] Assignee: Amazon.com, Inc., Seattle, Wash.
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[22] Filed: Sep. 12, 1997
[51] Int. Cl.⁶ G06F 17/60
[52] U.S. Cl. 705/26, 705/28, 381/1
[58] Field of Search 380/25, 235/2, 375, 378, 381

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0883076A2 12/1998 European Pat. Off.
WO 95/30961 11/1995 WIPO
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WO 98/21679 5/1998 WIPO

OTHER PUBLICATIONS
Jones, Chris. "Java Shopping Cart and Java Wallet; Oracles plans to join e-commerce initiative." Mar. 31, 1997, Info-World Media Group.

We claim:

1. A method of placing an order for an item comprising:
under control of a client system,
displaying information identifying the item; and
in response to only a single action being performed,
sending a request to order the item along with an identifier of a purchaser of the item to a server system;
under control of a single-action ordering component of the server system,
receiving the request;
retrieving additional information previously stored for the purchaser identified by the identifier in the received request; and
generating an order to purchase the requested item for the purchaser identified by the identifier in the received request using the retrieved additional information; and
fulfilling the generated order to complete purchase of the item
whereby the item is ordered without using a shopping cart ordering model.

Method and
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Amazon.com v. Barnesandnoble.com

- Equitable factors for preliminary injunctions:
- Likelihood of success on the merits
 - Possibility of irreparable harm absent an injunction
 - Balance of hardships on both sides
 - Public interest

Amazon.com v. Barnesandnoble.com

- Equitable factors for preliminary injunctions:
- Likelihood of success on the merits
 - Possibility of irreparable harm absent an injunction
 - Balance of hardships on both sides
 - Public interest

Same as with
permanent injunctions

Amazon.com v. Barnesandnoble.com

→ Equitable factors for preliminary injunctions:

Unique to preliminary injunctions

- Likelihood of success on the merits
- Possibility of irreparable harm absent an injunction
- Balance of hardships on both sides
- Public interest

Same as with permanent injunctions

Amazon.com v. Barnesandnoble.com

→ Equitable factors for preliminary injunctions:

Most important factors

- Likelihood of success on the merits
- Possibility of irreparable harm absent an injunction
- Balance of hardships on both sides
- Public interest

Amazon.com v. Barnesandnoble.com

→ What's necessary to succeed on the merits?

Amazon.com v. Barnesandnoble.com

→ What's necessary to succeed on the merits?

- A valid patent
- That is infringed
- (Also, lack of inequitable conduct)
- (Also, lack of license)
- (&c)

Amazon.com v. Barnesandnoble.com

- So a patent holder must show that it is likely to succeed on both
 - Validity and
 - Infringement
- “Likely” implies flexibility
 - Certainty of proof required
 - Degree of evidence required

Amazon.com v. Barnesandnoble.com

- Was Amazon likely to succeed on infringement?

Amazon.com v. Barnesandnoble.com

- Was Amazon likely to succeed on infringement?
- Yup
 - The bn.com system worked essentially the same way

Amazon.com v. Barnesandnoble.com

- Was Amazon likely to succeed on invalidity?

Amazon.com v. Barnesandnoble.com

- Was Amazon likely to succeed on invalidity?
- Nope
 - Several pieces of prior art disclose all the elements of the claimed invention – not yet enough for summary judgment, but enough to mount a serious challenge

Amazon.com v. Barnesandnoble.com

- Would Amazon have been likely to succeed on § 101 (assuming current law)?

Amazon.com v. Barnesandnoble.com

- Would Amazon have been likely to succeed on § 101 (assuming current law)?
 - Probably not – bn.com has a strong *Alice* argument
 - *But*, no need to decide that on a preliminary injunction – it doesn't require discovery

Celsis v. Cellzdirect

- Tech: hepatocytes (a type of liver cells) tend to die when frozen and thawed; this is a method of freezing them multiple times and preserving viability



US007604929B2

(12) United States Patent
Dryden et al.

(10) Patent No.: US 7,604,929 B2
(45) Date of Patent: Oct. 20, 2009

(54) CELLULAR COMPOSITIONS AND METHODS FOR THEIR PREPARATION

(75) Inventors: Daniel Dryden, Westminister, MD (US); James Hardy, Jmansville, MD (US)

(73) Assignee: In Vivo Technologies, Inc., Baltimore, MD (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 318 days.

(21) Appl. No.: 11/110,879

(22) Filed: Apr. 21, 2005

(65) Prior Publication Data
US 2005/0239042 A1 Oct. 27, 2005

(51) Int. Cl. (2006.01)
A01N 1/00 (2006.01)
C12N 5/00 (2006.01)
C12N 5/08 (2006.01)

(52) U.S. Cl. (2006.01)
435/1.1; 435/1.3; 435/370;
435/374; 435/375

(58) Field of Classification Search 435/1.1, 435/1.3, 370, 374, 375
See application file for complete search history.

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WO WO/2005/000376 1/2005

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Primary Examiner—Ileana Popa
(74) Attorney, Agent, or Firm—Loeb & Loeb LLP

(57) ABSTRACT

The present invention relates to novel cell (e.g., hepatocyte, etc.) compositions and methods for their preparation and use. In particular, the invention concerns methods of processing preparations of such cells so as to permit their repeated cryopreservation and thawing while retaining substantial viability. The invention also concerns preparations of cells (e.g., hepatocytes) that have been repeatedly cryopreserved and thawed.

11 Claims, No Drawings

U.S. Patent No. 7,604,929

→ "Cellular compositions and methods for their preparation"



US007604929B2

(12) United States Patent
Dryden et al.

(10) Patent No.: US 7,604,929 B2
(45) Date of Patent: Oct. 20, 2009

(54) CELLULAR COMPOSITIONS AND METHODS FOR THEIR PREPARATION

(75) Inventors: Daniel Dryden, Westminister, MD (US); James Hardy, Jmansville, MD (US)

(73) Assignee: In Vivo Technologies, Inc., Baltimore, MD (US)

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C12N 5/08 (2006.01)

(52) U.S. Cl. (2006.01)
435/1.1; 435/1.3; 435/370;
435/374; 435/375

(58) Field of Classification Search 435/1.1, 435/1.3, 370, 374, 375
See application file for complete search history.

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Shibata et al., Drug Metabolism and Disposition, 2002, 30: 892-896.*
Oehninger et al., Mol Cell Endocrinol, 2000, 169: 3-10.*
Hengstler et al., Drug Metab. Rev., 2000, 32: 51-118, Abstract.*
Ankura et al., U.W. solution a promising tool for cryopreservation of primarily isolated rat hepatocytes, 9 J. Hepatobiliary Pancreat. Surg. 742-749 (2002).
Marsh et al., Hypothermic Preservation of Hepatocytes III Effects of Resuspension Media on Viability after up to 7 Days of Storage, 13(3) Hepatology 500-508 (1991).
Smirnova et al., Optimization of Porcine Hepatocyte Cryopreservation by Comparison of Viability and Enzymatic Activity of Fresh and Cryopreserved Cells, 70 Acta Vet. Bms. 141-147 (2001).
Vincent et al., Adjustment of the Osmolality of Percoll for the Isopycnic Separation of Cells and Cell Organelles, 141 Analytical Biochemistry 322-328 (1984).

1. A method of producing a desired preparation of multi-cryopreserved hepatocytes, said hepatocytes, being capable of being frozen and thawed at least two times, and in which greater than 70% of the hepatocytes of said preparation are viable after the final thaw, said method comprising:
(A) subjecting hepatocytes that have been frozen and thawed to density gradient fractionation to separate viable hepatocytes from non-viable hepatocytes,
(B) recovering the separated viable hepatocytes, and
(C) cryopreserving the recovered viable hepatocytes to thereby form said desired preparation of hepatocytes without requiring a density gradient step after thawing the hepatocytes for the second time, wherein the hepatocytes are not plated between the first and second cryopreservations, and wherein greater than 70% of the hepatocytes of said preparation are viable after the final thaw.

11 Claims, No Drawings

U.S. Patent No. 7,604,929

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ds
n"

Celsis v. Cellzdirect

→ Method:

- Freeze and thaw once;
- Do density gradient fractionation (a method of separating live cells from dead cells);
- Recover the survivors;
- Freeze again; and
- Thaw again with 70% viability

Celsis v. Cellzdirect

→ Equitable factors:

- Likelihood of success on the merits
- Possibility of irreparable harm absent an injunction
- Balance of hardships on both sides
- Public interest

Celsis v. Cellzdirect

→ Equitable factors:

- Likelihood of success on the merits
- Possibility of irreparable harm absent an injunction
- Balance of hardships on both sides
- Public interest

Celsis v. Cellzdirect

→ Likelihood of success on the merits?

- Infringement is clear (once court construes the claims)
- Validity seems iffier

Celsis v. Cellzdirect

- Likelihood of success on the merits?
 - Everything but the second freezing step is conventional
 - Cellzdirect had an expert testify that a prior-art reference disclosed the second freezing step, but the Federal Circuit disagreed
 - “Just try again” isn’t good enough because the field is unpredictable

Celsis v. Cellzdirect

- Likelihood of success on the merits?
 - Dissent: Just trying again seems like an obvious thing to try
 - Dissent: It can’t both be unpredictable and clear that it wouldn’t work
 - Dissent: The majority applied the wrong legal standard
 - Is one side more persuasive?

Celsis v. Cellzdirect

- Equitable factors:
- Likelihood of success on the merits
 - Possibility of irreparable harm absent an injunction
 - Balance of hardships on both sides
 - Public interest

Celsis v. Cellzdirect

- Is Celsis likely to suffer irreparable injury absent an injunction?

Celsis v. Cellzdirect

- Is Celsis likely to suffer irreparable injury absent an injunction?
- “price erosion, damage to ongoing customer relationships, loss of customer goodwill (e.g., when an effort is later made to restore the original price), and loss of business opportunities”
 - Are these really irreparable?

**Permanent
injunctions**

eBay v. MercExchange

- eBay: online auctions
- MercExchange: online consignment system



US05845265A

United States Patent [19] [11] **Patent Number:** 5,845,265
Woolston [45] **Date of Patent:** Dec. 1, 1998

[54] **CONSIGNMENT NODES** 5,206,803 4/1993 Vitagliano et al.
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 5,465,291 11/1995 Burns et al.

[75] Inventor: Thomas G. Woolston, Arlington, Va.
 [73] Assignee: MercExchange, L.L.C., Alexandria, Va.

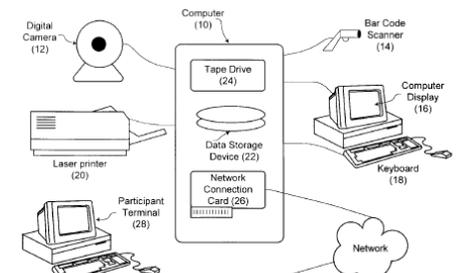
[21] Appl. No.: 554,704
 [22] Filed: Nov. 7, 1995

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 [52] U.S. Cl. 705/37, 705/27 Gould, M. "Sun Microsystems Bringing Interactive Technology to the WWW," Open Information Systems, 10:3 p. 29, Mar. 1995.
 [58] Field of Search 395/226, 237, 395/227, 235, 236, 239; 235/383, 381; 705/26, 27, 35, 36, 37, 39

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 Attorney, Agent, or Firm—Thomas G. Woolston

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29 Claims, 13 Drawing Sheets



U.S. Patent No. 5,845,265

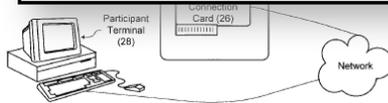
→ "Consignment nodes"

[54] CONSIGNMENT NODES
 [75] Inventor
 [73] Assignee
 [21] Application
 [22] Filed
 [63] Continuation
 [51] Int. Cl.
 [52] U.S. Class.
 [58] Field of Search

[56]
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 4,346,444
 4,674,000
 4,739,477
 4,742,483
 4,751,000
 4,789,952
 4,799,433
 4,833,300
 4,870,000
 4,885,000
 4,903,300
 4,910,000
 5,063,300
 5,101,300
 5,193,000

BACKGROUND OF THE INVENTION

This application is a continuation in part of U.S. patent application Ser. No. 08/427,820 filed Apr. 26, 1995, incorporated herein by reference in its entirety. The present invention relates to used and collectible goods offered for sale by an electronic network of consignment stores. More specifically, the present invention may be an electronic "market maker" for collectable and used goods, a means for electronic "presentment" of goods for sale, and an electronic agent to search the network for hard to find goods. In a second embodiment to the present invention, a low cost posting terminal allows the virtual presentment of goods to market and establishes a two tiered market of retail and wholesale sales.

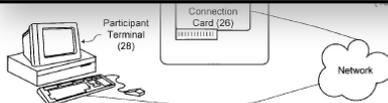


[54] CONSIGNMENT NODES
 [75] Inventor
 [73] Assignee
 [21] Application
 [22] Filed
 [63] Continuation
 [51] Int. Cl.
 [52] U.S. Class.
 [58] Field of Search

[56]
 5,206,803
 4,1993
 Vitagliano et al.

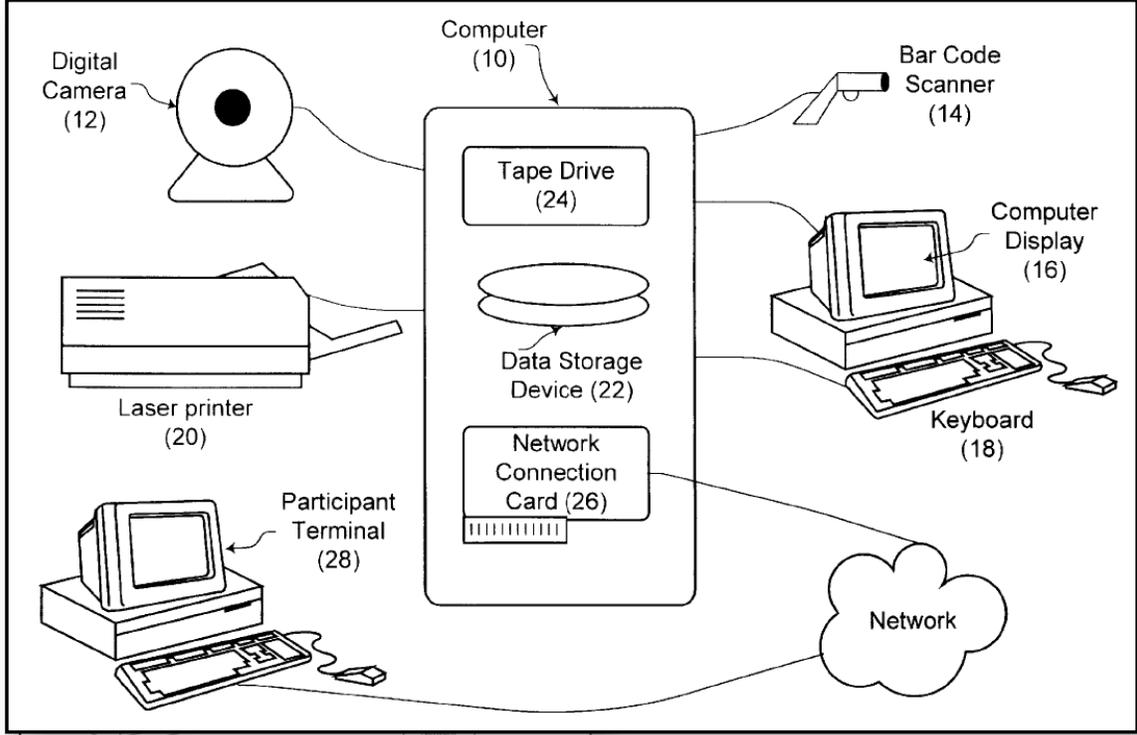
[57] **ABSTRACT**

A method and apparatus for creating a computerized market for used and collectible goods by use of a plurality of low cost posting terminals and a market maker computer in a legal framework that establishes a bailee relationship and consignment contract with a purchaser of a good at the market maker computer that allows the purchaser to change the price of the good once the purchaser has purchased the good thereby to allow the purchaser to speculate on the price of collectibles in an electronic market for used goods while assuring the safe and trusted physical possession of a good with a vetted bailee.





U.S. Patent No.



U.S. Patent No. 5,845,265

United States Patent [19] Patent Number: 5,845,265
 Woolston [45] Date of Patent: Dec. 1, 1998

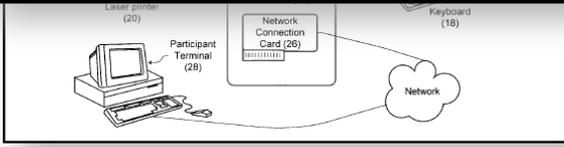
[54] CONSIGNMENT NODES 5,206,803 4/1993 Vitagliano et al.
 [75] Inventor: Thomas G. Woolston, Arlington, Va. 5,235,080 8/1993 Bijnagte
 [72] Assignee: MercExchange, L.L.C., Alexandria, Va. 5,237,900 8/1993 Peng et al.
 5,239,462 8/1993 Jones et al.
 5,262,942 11/1993 Earle

Therefore, I claim:

1. A system for presenting a data record of a good for sale to a market for goods, said market for goods having an interface to a wide area communication network for presenting and offering goods for sale to a purchaser, a payment clearing means for processing a purchase request from said purchaser, a database means for storing and tracking said data record of said good for sale, a communications means for communicating with said system to accept said data record of said good and a payment means for transferring funds to a user of said system, said system comprising:

- a digital image means for creating a digital image of a good for sale;
- a user interface for receiving textual information from a user;
- a bar code scanner;
- a bar code printer;
- a storage device;

- a communications means for communicating with the market; and
- a computer locally connected to said digital image means, said user interface, said bar code scanner, said bar code printer, said storage device and said communications means, said computer adapted to receive said digital image of said good for sale from said digital image means, generate a data record of said good for sale, incorporate said digital image of said good for sale into said data record, receive a textual description of said good for sale from said user interface, store said data record on said storage device, transfer said data record to the market for goods via said communications means and receive a tracking number for said good for sale from the market for goods via said communications means, store said tracking number from the market for goods in said data record on said storage device and printing a bar code from said tracking number on said bar code printer.



eBay v. MercExchange

→ Is this patentable subject matter?

eBay v. MercExchange

→ Is this patentable subject matter?

- Abstract idea (?): “an electronic market designed to facilitate the sale of goods between private individuals by establishing a central authority to promote trust among participants”
- Other (conventional?) elements: computer; scanner; &c
- Under *Bilski* and *Alice*, MercExchange has problems

eBay v. MercExchange

→ A bit of history

- Historically, there were courts of equity and courts of law
- Courts of law applied statutes and could award damages
- Courts of equity applied principles of substantial justice and could order non-money forms of relief

eBay v. MercExchange

→ A bit of history

- The difference was abolished in the federal courts in 1938
- Vestiges persist
- One big difference: the decisions judges and juries can make

eBay v. MercExchange

- Injunctions: the general rule of equity balances four factors
- Irreparable harm
 - Inadequacy of money damages
 - Balance of the hardships
 - Public interest

eBay v. MercExchange

- So how does this apply to patent law?

eBay v. MercExchange

- So how does this apply to [patent law](#)?
 - Court: the normal rules of equity apply
 - Even though patents are property

eBay v. MercExchange

- So how does this apply to [patent law](#)?
 - Court: the normal rules of equity apply
 - Even though patents are property
 - The existence of a right does not necessarily correlate to the remedy
 - Note: copyright is also a property right, and the four-factor test applies

eBay v. MercExchange

- Dueling concurrences!
- Roberts/Scalia/Ginsburg?

eBay v. MercExchange

- Dueling concurrences!
- Roberts/Scalia/Ginsburg?
 - History tells us that injunctions are a reasonable remedy in patent cases
 - First factor: Irreparable harm is likely given the difficulty of protecting a right to exclude through money damages
 - Fourth factor: Strong public interest in patent incentives

eBay v. MercExchange

- Dueling concurrences!
- Kennedy/Stevens/Souter/Breyer?

eBay v. MercExchange

- Dueling concurrences!
- Kennedy/Stevens/Souter/Breyer?
 - History is useful, but only to a point; patents are economically different now
 - Patent trolls exploit asymmetric bargaining power
 - Royalties may be perfectly adequate to compensate non-practicing entities

eBay v. MercExchange

- Dueling concurrences!
- Kennedy/Stevens/Souter/Breyer?
 - This was relatively early in the concern about patent trolls/the patent system
 - The opinion presaged arguments about anticommons and patent thickets
 - “When the patented invention is but a small component of the product...”

eBay v. MercExchange

- Why have injunctive relief at all?

eBay v. MercExchange

- Why have injunctive relief at all?
 - Property is property
 - It's hard to value patent rights
 - Injunctions force the parties to come to a market value
 - This is the debate between property rules and liability rules

eBay v. MercExchange

- Injunction: property rule
 - Best when valuation is hard
- Damages: liability rule
 - Best when transaction costs are high
 - Many parties
 - Sunk costs
 - Holdup problem

eBay v. MercExchange

→ Reaction:

- Could this help the patent-troll problem?
- Litigants need to be really careful to show irreparable harm
- “Based on this decision, it is now clear that the value of a patent does depend upon the identity of the owner.”
–Prof. Dennis Crouch
- More patent holders have gone to the ITC

Edwards Lifesciences

→ District court denied permanent injunction

- Theory: CoreValve was stopping its infringement anyway
- And then it didn't do so
- So the Federal Circuit vacates and remands

“**A patentee’s right to exclude is a fundamental tenet of patent law.** ... The innovation incentive of the patent is grounded on the market exclusivity whereby the inventor profits from his invention. Absent adverse equitable considerations, **the winner of a judgment of validity and infringement may normally expect to regain the exclusivity that was lost with the infringement.** ...

“**The Court in *eBay* did not hold that there is a presumption against exclusivity on successful infringement litigation.** The Court did not cancel 35 U.S.C. §154, which states that ‘Every patent shall contain . . . a grant . . . of the right to exclude others from making, using, offering for sale, or selling the invention,’ **nor did the Court overrule Article I section 8 of the Constitution,** which grants Congress the power to ‘secur[e] for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.’”

Edwards Lifesciences v. CoreValve, Nard at 965

Bosch v. Pylon

→ Tech: beam windshield wipers



Bosch v. Pylon

- District court denied a permanent injunction:
 - Wiper blades are not at the core of Bosch's business
 - The market had more than two competitors
- Federal Circuit: This makes no sense
 - Why not?

Bosch v. Pylon

- Federal Circuit:
 - Irreparable harm is especially likely when the parties are competitors
 - "irreversible price erosion, loss of market share, loss of customers, and loss of access to potential customers" (Nard 973)
 - (Also, Pylon was in shaky financial condition)

z4 v. Microsoft

- z4 patents: methods for limiting the unauthorized use of software through online activation
- Microsoft products: Windows and Office
- Court: Eastern District of Texas
 - Usually considered highly favorable to patent holders

United States Patent [19] Patent Number: 6,044,471
Colvin [45] Date of Patent: Mar. 28, 2000

[54] METHOD AND APPARATUS FOR SECURING SOFTWARE TO REDUCE UNAUTHORIZED USE. 5,842,124 11/1998 Kenagy et al. 455,411
Primary Examiner—Robert W. Beausoliel, Jr.
Assistant Examiner—Christopher A. Revak
Attorney Agent, or Firm—Brooks & Kushman P.C.

[75] Inventor: David S. Colvin, Commerce Township, Oakland County, Mich.

[73] Assignee: Z4 Technologies, Inc., Commerce Township, Mich.

[22] Appl. No.: 09/090,620

[21] Filed: Jun. 4, 1998

[51] Int. Cl.⁷ H04L 9/32

[52] U.S. Cl. 713/202; 709/229; 705/51

[58] Field of Search 714/200, 709/229; 380/3, 4, 23, 705/51, 52, 53, 55, 57, 59

[56] References Cited
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4,796,220 1/1989 Wolfe 3804
5,182,770 1/1993 Motyczky et al.
5,287,408 2/1994 Samson
5,341,429 8/1994 Stinger et al. 705/52
5,509,070 4/1996 Schul
5,584,038 10/1996 Grantz et al.
5,579,479 11/1996 Pinn 713/202
5,652,793 7/1997 Picen et al.

45 Claims, 6 Drawing Sheets

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graph TD
    START([START]) --> 80[ASSOCIATE PASSWORD WITH SOFTWARE AND DISTRIBUTE SOFTWARE WITHOUT PASSWORD]
    80 --> 82[REQUIRE END USER TO REGISTER SOFTWARE]
    82 --> 84[PERIODICALLY REQUIRE NEW PASSWORD FOR CONTINUED USE OF SOFTWARE]
    84 --> 86[COMMUNICATE PASSWORD TO SOFTWARE TO ENABLE SOFTWARE]
    86 --> END([END])
```

U.S. Patent No. 6,044,471

→ Method and apparatus for securing software to reduce unauthorized use

US06044471A

United States Patent [19] [11] Patent Number: **6,044,471**
Colvin [45] Date of Patent: **Mar. 28, 2000**

[54] **METHOD AND APPARATUS FOR SECURING SOFTWARE TO REDUCE UNAUTHORIZED USE.** 5,842,124 11/1998 Kenagy et al. 455,411
Primary Examiner—Robert W. Beausoliel, Jr.
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[75] Inventor: **David S. Colvin**, Commerce Township, Oakland County, Mich. [57] **ABSTRACT**

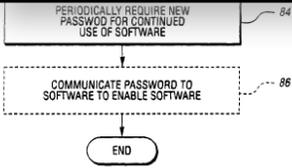
[73] Assignee: **Z4**
 Tos

[21] Appl. No.: 09/8
 [22] Filed: Jun
 [51] Int. Cl. 7
 [52] U.S. Cl.
 [58] Field of Search
 71

[56] U.S. Pat.
 4,796,220 1/1989
 5,182,770 1/1993
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 5,341,429 8/1994
 5,509,070 4/1996
 5,564,038 10/1996
 5,579,479 11/1996
 5,652,793 7/1997

U.S. Patent No. 6,044,471

10. A method of securing software to reduce unauthorized use, the method comprising:
 associating a series of passwords with the software;
 requiring an end user to contact a representative to obtain a password previously associated with the software;
 communicating a password previously associated with the software to the software, wherein the software is not functional until the password has been communicated;
 and
 subsequently requiring a new password, the new password being obtained from the series of passwords previously associated with the software.



z4 v. Microsoft

- Trial: The jury finds Microsoft liable for infringement and orders it to pay \$115 million in damages
- Post-trial: z4 asks for a permanent injunction
 - pre-eBay, this would have been a slam dunk

“z4 asks the Court to **enjoin Microsoft from making, using, selling, offering for sale, and/or importing its current software products that use product activation**, *i.e.* Windows XP products since 2001 and Office products since 2000. z4’s motion proposes that the Court order Microsoft to **deactivate the servers that control product activation for Microsoft’s infringing products** and to re-design its Windows and Office software products to eliminate the infringing technology. Microsoft will release the next generation of its Windows and Office software—Windows Vista (2007) and Office (2007)—in January of 2007, and both products plan to eliminate the infringing product activation technology.”

z4 v. Microsoft

- What do you think would have happened if the court had granted the motion?
- Windows and Office become deactivated?
 - or, Microsoft and z4 settle?

z4 v. Microsoft

- Factor 1: Irreparable harm to z4
- z4: We made tremendous efforts to commercialize and failed due to Microsoft's infringement
 - z4: We might be very successful but for Microsoft's infringement
 - Court: Microsoft's infringement does not affect z4's ability to license its technology
 - Court: Microsoft does not sell its activation alone; it is a small component of the larger product

z4 v. Microsoft

- Factor 1: Irreparable harm to z4
- "z4 will not suffer **lost profits**, the **loss of brand name recognition** or the **loss of market share** because of Microsoft's continued sale of the infringing products. These are the type of injuries that are often incalculable and irreparable. The only entity z4 is possibly prevented from marketing, selling or licensing its technology to absent an injunction is Microsoft."

z4 v. Microsoft

- **Factor 2: Adequacy of remedies at law**
 - Court: Infringement can be hard to remedy because an infringer can saturate the market, damaging the patent holder's product in a way that's impossible to assess
 - Court: Calculating z4's remedy won't be hard, since we can just use the same royalty rate and z4 is not suffering any lost sales
 - Also: Microsoft can be trusted to pay

z4 v. Microsoft

- **Factor 3: Balance of hardships**
 - Microsoft: Redesigning Windows and Office would take time and impose hardships
 - Microsoft: Turning off activation could lead to the market being flooded by pirated software
 - z4: Microsoft using our IP creates hardships

z4 v. Microsoft

→ Factor 3: Balance of hardships

- “Although the arguments presented by Microsoft may be hypothetical, the scenarios Microsoft describes are not out of the realm of possibility and are in some instances quite likely. Importantly, the potential hardships Microsoft could suffer if the injunction were granted **outweigh any limited and reparable hardships that z4 would suffer** in the absence of an injunction.”

z4 v. Microsoft

→ Factor 4: Public interest

- Windows and Office are used by public
- Taking them off the market for a redesign would hurt the public
- “Under both aspects of z4’s proposed permanent injunction, there is a risk that certain sectors of the public might suffer some negative effects. However, the Court is unaware of any negative effects that might befall the public in the absence of an injunction.”

Permanent injunctions

→ Injunctions after *eBay*

- The most important factor: irreparable harm
- **Whether plaintiff and defendant compete**
- Whether plaintiff has lost sales
- How many competitors there are
- How important a component the patented invention is
- Whether plaintiff has licensed others
- Whether plaintiff has delayed bringing suit

Permanent injunctions

→ What counts toward the public interest?

- Harm to the sanctity of property rights?
- Harm to the American consumer?
- Harm to the infringing firm and its workers?
- Harm to the incentives created by patents?
- Harm to the government/national security?
- Harm to public health?
- Harm to Congress's access to Blackberries?

Permanent injunctions

- Private responses to injunctions
 - Cross-licensing
 - Patent pools
 - Standards-setting organizations
 - RAND (reasonable and nondiscriminatory) licensing terms

Tech versus pharma

- The technology industry has largely supported patent reform and narrower patent rights
 - Ethos of open innovation
 - Hundreds of patents covering any given product
 - High degree of holdup
 - Low ratio of innovation costs to copying costs

Tech versus pharma

- The pharmaceutical industry has largely supported strong patent rights
- Small number of very valuable patents
 - Low degree of holdup
 - Very high ratio of innovation costs to copying costs

Next time

Next time

- Remedies: damages
- Have a wonderful Thanksgiving!

