Books Might Cost More Now:

The Role of the Computer Expert in Software Patent Litigation

Michael I. Shamos, Ph.D., J.D.
Institute for Software Research International
Carnegie Mellon University

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Outline

- The case
- Software patents
- Experts
- Patent litigation
  – Claim interpretation
  – Infringement
  – Invalidity
  – Trial
- Will your books cost more?

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Patents in Suit

- Levergood et al. 5,708,780 (1995, 1998)
  Session IDs in URLs. Example:

  http://www.sephora.com/track.jhtml;jsessionid=
  WPU0TSEK45JEXLAUCJABXCQ?categoryId=B10

- Payne at al. 5,715,314 (1994, 1998)
  Payne at al. 5,909,492 (1997, 1999)
  Shopping cart model of eCommerce

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Industry Reaction

- "It appears to knock the life out of virtually every payment system on the Internet, as well as every single company that uses any kind of deferred transaction or shopping cart." C|Net, March 3, 1998
- "It will be fought tooth and nail. They basically announced that they now own the Internet market, and other companies are not likely to concede that without a fight." C|Net, March 3, 1998
- "Open Market may have some of the more seminal U.S. patents. It filed applications early and often for patents to cover technology for secure online payments and other networked commerce processes." *Internet World*, April 2000
- "I now believe it's possible that the current rules governing business-method and software patents could end up harming us all." Jeff Bezos, Amazon CEO, July 2000

U.S. Patents of Jeff Bezos

- 6,917,922 Contextual presentation of information about related orders during browsing of an electronic catalog (issued July 12, 2005! Filed 2001)
- 6,889,250 Method and system for information exchange between users of different web pages
- 6,606,608 Method and system for providing a discount at an auction
- 6,525,747 Method and system for conducting a discussion relating to an item
- 6,029,141 Internet-based customer referral system
- 5,960,411 Method and system for placing a purchase order via a communications network (the "1-click patent")

- Amazon.com owns 49 U.S. patents

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IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

SOVERAIN SOFTWARE LLC,	§	
	§	
Plaintiff,	§	
	§	**Hon. Leonard E. Davis**
v.	§	
	§	**Civil Action No: 6-04CV14**
AMAZON.COM, INC.,	§	
	§	
Defendant.	§	

- Three patents obtained by Open Market, Inc.
- Acquired by Divine, Inc. Divine went bankrupt
- Soverain bought patents out of Divine's bankruptcy
- Soverain didn't invent anything, but owns the patents
- January 2004: case filed
- August 2005: Amazon paid Soverain $40M to settle

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Software Patents

- "Whoever invents or discovers any new and useful process … or any new and useful improvement thereof, may obtain a patent therefor …" 35 U.S.C. §101
- Application to the U.S. Patent & Trademark Office, part of the Dept. of Commerce
- Examined to determine whether satisfies the statutory requirements
- If so, a patent will issue

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Patent Structure

- A patent consists of: a description of how to make and use the invention AND
- One or more "claims," which are legal descriptions of what the inventor regards as his invention
- Each claim is its own mini-patent
- Each claim can be infringed or not infringed separately
- If any claim of a patent is infringed, the owner is entitled to damages and an injunction against further infringement

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ADMINISTRATIVE DATA

United States Patent 5,708,780

Levergood et al. Date of Patent: Jan. 13, 1998

[54] INTERNET SERVER ACCESS CONTROL AND MONITORING SYSTEMS

[75] Inventors: Thomas Mark Levergood, Hopkinton; Lawrence C. Stewart, Burlington; Stephen Jeffrey Morris, Westford; Andrew C. Payne, Lincoln; George Winfield Treese, Newton, all of Mass.

[73] Assignee: Open Market, Inc., Cambridge, Mass.

[21] Appl. No.: 474,096

[22] Filed: Jun. 7, 1995

[51] Int. Cl.[6] G06F 15/56

[52] U.S. Cl. 395/200.12; 395/200.15

[57] ABSTRACT

This invention relates to methods for controlling and monitoring access to network servers. In particular, the process described in the invention includes client-server sessions over the Internet involving hypertext files. In the hypertext environment, a client views a document transmitted by a content server with a standard program known as the browser. Each hypertext document or page contains links to other hypertext pages which the user may select to traverse. When the user selects a link that is directed to an access-controlled file, the server subjects the request to a secondary server which determines whether the client has an authorization or valid account. Upon such verification, the user is provided with a session identification which allows the user to access to the requested file as well as any other files within the present protection domain.

45 Claims, 7 Drawing Sheets

DESCRIPTION (SPECIFICATION)

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings, FIG. 1 is a graphical illustration of the Internet. The Internet 10 is a network of millions of interconnected computers 12 including systems owned by Internet providers 16 and information systems (BBS) 20 such as Compuserve or America Online. Individual or corporate users may establish connections to the Internet in several ways. A user on a home PC 14 may purchase an account through the Internet provider 16. Using a modem 22, the PC user can dial up the Internet provider to connect to a high speed modem 24 which, in turn, provides a full service connection to the Internet. A user 18 may also make a somewhat limited connection to the Internet through a BBS 20 that provides an Internet gateway connection to its customers.

. . .

CLAIMS

What is claimed is:

1. A method of processing service requests from a client to a server system through a network, said method comprising the steps of:

forwarding a service request from the client to the server system, wherein communications between the client and server system are according to hypertext transfer protocol;

returning a session identifier from the server system to the client; and

appending as part of a path name in a uniform resource locator the session identifier to the request and to subsequent service requests from the client to the server system within a session of requests.

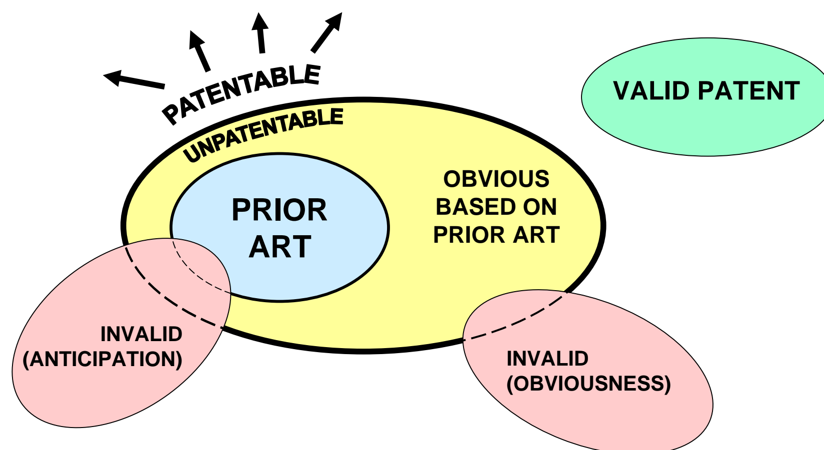
. . .

Prior Art

- An invention is not patentable if
  - it was in public use or on sale more than 1 year before the date of the patent application; or
  - it was patented or described in a printed publication before the date of invention; or
  - "the differences between the subject matter … and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. §103

PRIOR ART REJECTIONS

Inventions and Prior Art



Patent Litigation

- The patent owner must prove infringement by a preponderance of the evidence (more likely than not)
- The defendant has several defenses:
  - Non-infringement. We didn't infringe.
  - Invalidity. The patent should not have been issued. Not new or new but obvious.
  - Inequitable conduct. The inventor failed to disclose relevant prior art to the Patent Office.
  - …

Standard of proof: "clear and convincing evidence"

Patent Litigation Phases

- Claim interpretation
  - What did the words of the claims mean to one of ordinary skill in the art when the application was filed?
  - Determination is made by the judge alone ← EXPERT TESTIMONY

PRE-TRIAL (JUDGE)

PRE-TRIAL (JUDGE) OR AT TRIAL (JURY)

- Infringement
  - Given the claim interpretation, does the defendant infringe the claim? ← EXPERT TESTIMONY
- Invalidity
  - Given the claim interpretation, is the claim valid? ← EXPERT TESTIMONY

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Experts

- Who's an expert?
- "If … specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue,
  a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify … in the form of an opinion …, if
  (1) the testimony is based upon sufficient facts or data,
  (2) the testimony is the product of reliable principles and methods, and
  (3) the witness has applied the principles and methods reliably to the facts of the case." Federal Rules of Evidence §702

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How Experts Participate

- They get hired by a party's law firm
- How do you locate an expert? Search agency.
- Study the case; write a report with opinions and bases
- The report is not evidence
- If not in report, can't testify to it at trial
- Experts are deposed (questioned under oath out of court)
- Experts can be challenged based on qualifications, bias or methodology
- Experts support motions with declarations and testify at hearings and trials

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Trial of a Patent Case

- Factual discovery: documents, witnesses
- Claim interpretation
  - Expert reports; expert depositions
- Noninfringement motion
  - Expert reports; expert depositions
- Invalidity motion
  - Expert reports; expert depositions
- Trial
- Appeal. Special court for patent cases: Court of Appeals for the Federal Circuit

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Infringement

- Do any of the claims "read on" the accused process?
- This is examined by actually reading the claims to see if every step or its equivalent is present in the accused process
- The claims are read using the court's claim interpretations
- The patent owner must prove infringement
- Expert witnesses are needed to perform the "read on" exercise

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Levergood '780 Claim 1

1. A method of processing service requests from a client to a server system through a network, said method comprising the steps of:
[a] forwarding a service request from the client to the server system, wherein communications between the client and server system are according to hypertext transfer protocol;
[b] returning a session identifier from the server system to the client; and
[c] appending as part of a path name in a uniform resource locator the session identifier to the request and to subsequent service requests from the client to the server system within a session of requests.

AMAZON EXAMPLE

Claim Interpretation

IS A REQUEST A SINGLE MESSAGE?

1. A method of processing service requests from a client to a server system through a network, said method comprising the steps of:
[a] forwarding a service request from the client to the server system, wherein communications between the client and server system are according to hypertext transfer protocol; IS THIS RESTRICTED TO HTTP 1.0?
[b] returning a session identifier MUST IT BE CONTIGUOUS? to the client; and
[c] appending as part of a path name in a uniform
DOES THIS ONLY MEAN "ADD AT END"? DOES THIS INCLUDE THE FILE NAME?
to subsequent service requests from the client to the server system within a session of requests.

MUST A SESSION BE UNINTERRUPTED?
BETWEEN ONE CLIENT AND ONE SERVER?

What Are the Parties After in Claim Interpretation?

- Claims are interpreted the same way for infringement and invalidity
- Patent owner
  - Wants an easy infringement case (specific definitions tailored to the defendant's system)
  - Avoid general definitions that bring in disabling prior art
- Defendant
  - Wants to avoid infringement
  - Definitions to bring in prior art (for invalidity)
- Focus on the infringement case because of the lower proof standard

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The Court's Interpretations

- hypertext transfer protocol
  – The client/server protocol used to access information on the World Wide Web (not limited to HTTP 1.0)
- session
  – A series of requests and responses to perform a complete task or set of tasks between a client and a server system
- session identifier
  – A text string that identifies a session (not necessarily numeric)
- path name
  – A sequence of zero or more elements that follows the host address in a URL (not excluding the file name and after)
- appending
  – Tagging, adding, affixing or supplementing (not just a suffix)

Infringement

- Do any of the claims "read on" the accused process?
- This is examined by actually reading the claims to see if every step or its equivalent is present in the accused process
- The claims are read using the court's claim interpretations
- The patent owner must prove infringement
- Expert witnesses are needed to perform the "read on" exercise

Invalidity

- Every claim of a patent is presumed valid. 35 U.S.C. §282
- The infringer must prove invalidity
- Generally done by exhibiting prior patents or publications
- The court's claim interpretations are used
- Experts are needed to explain the prior art

An Invalidity Argument

- From "Using Tcl to Process HTML Forms," by Glenn Trewitt, allegedly published in May 1994 as a DEC Tech Report. ('780 patent filing date: June 1995)

6.3. Maintaining State -- In the URL

The mechanism described in this section is somewhat speculative -- we haven't used it, and there is not currently enough information to know if it is truly effective. It is presented here as a possible option.

The URL can also be used to store a small amount of state, by embedding a small datum (such as a handle for state maintained by the server) in the URL. For example, one might construct URLs of the form:

```
http://nsl.pa.dec.com/BigApp/handle/cgi-bin/order
```

In this case, the server's directory BigApp/*handle* would be a symbolic link to the single real copy of the HTML sources and scripts. When the script executes, it would examine the SCRIPT_NAME environment variable to determine the value of *handle*.

This scheme requires that either symbolic links be maintained for each possible *handle* or that the httpd server be modified to map all of these possible directories onto a single real directory.

Invalidity

- Is the Tech report a "printed publication" as used in the statute?
  - **Patent Office determined "no"! Not "generally available."**
- Is there a difference between maintaining "state" and maintaining a "session"?
  - **Amazon moved to prevent me from testifying on the distinction.**
- Is there any mention of including the "handle" in subsequent service requests?
  - **No. Reference mentions only one element of the claim**
- What is the effect of the "speculative" language?
  - **Does the reference instruct the reader to make the invention?**

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The Result

- Infringement was clear
- Amazon could not demonstrate invalidity
- The case settled 3 days before trial for $40 million

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Will Books Cost More at Amazon.com?

- No! If they raise prices, they'll lose market share
- The cost will be shouldered by investors
- Or will it?

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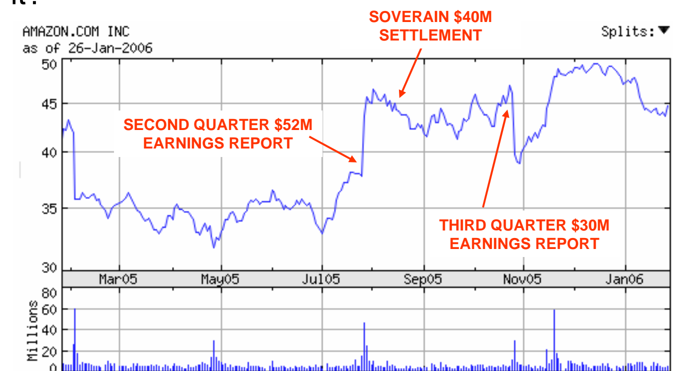

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Q&A

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Re-Examination

- Anyone who believes a patent was issued in error may pay a fee and request re-examination by the Patent Office in light of additional prior art
- The Patent Office may allow the re-examination or not
- If re-examination is allowed, the Patent Office may re-affirm on or more claims, invalidate one or more claims, or allow new claims
- The patents-in-suit were re-examined. One week before trial, all claims of one of them were affirmed and 91 new claims were allowed.

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Expert Reports

- Report must contain
  - all opinions and the basis and reasons therefor;
  - data or other information considered by the witness in forming the opinions;
  - exhibits to be used to support the opinions;
  - qualifications of the witness + list of all publications authored by the witness for the last 10 years;
  - compensation to be paid for the study and testimony;
  - listing of any other cases in which the witness has testified as an expert for the past 4 years. FRCP Rule 26(a)(2).

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Soverain

- Counsel: Klarquist Sparkman LLP (Portland)

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Why Tyler, Texas?

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Why Tyler, Texas?

- Only 4 of the 94 U.S. District Courts have special patent rules:
  N.D. California (Silicon Valley)
  W.D. Pennsylvania (Pittsburgh)
  N.D. Georgia (Atlanta)
  E.D. Texas (Tyler)
- Total patent cases in the U.S.: ~3000 per year
- 50 filed in E.D. Texas in 2003; 103 in 2004
  - Patent rank: 8th in U.S.; 2nd in cases per judge
- Rules are precise and streamlined; designed to move cases expeditiously: “rocket docket”

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Why Tyler, Texas?

- E.D. Texas judges do not transfer cases out of the district
- Benefits local attorneys
- Many high-value cases
- Jury pool tends to favor patent owners

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