

US005634012A

United States Patent [19]

[11] Patent Number: **5,634,012**

Stefik et al.

[45] Date of Patent: **May 27, 1997**

[54] **SYSTEM FOR CONTROLLING THE DISTRIBUTION AND USE OF DIGITAL WORKS HAVING A FEE REPORTING MECHANISM**

2236604 4/1991 United Kingdom .
WO9220022 11/1992 WIPO .
9301550 1/1993 WIPO G06F 11/34

OTHER PUBLICATIONS

[75] Inventors: **Mark J. Stefik**, Woodside; **Ralph C. Merkle**, Sunnyvale; **Peter L. T. Pirolli**, El Cerrito, all of Calif.

European Search Report for Corresponding European Application 95308414.2.

U. Flasche et al., Decentralized Processing of Documents, *Comput. & Graphics*, vol. 10, No. 2, 1986, pp. 119-131.

R. Mori et al., Superdistribution: The Concept and the Architecture, *The Transactions of the IEICE*, vol. E 73, No. 7, 1990, Tokyo, JP, pp. 1133-1146.

[73] Assignee: **Xerox Corporation**, Stamford, Conn.

[21] Appl. No.: **344,773**

[22] Filed: **Nov. 23, 1994**

(List continued on next page.)

[51] Int. Cl.⁶ **G06F 17/60**

[52] U.S. Cl. **395/239**

[58] Field of Search 364/419, 19, 401 R, 364/408

Primary Examiner—Donald E. McElheny, Jr.
Attorney, Agent, or Firm—Richard B. Domingo

[57] ABSTRACT

A fee accounting mechanism for reporting fees associated with the distribution and use of digital works. Usage rights and fees are attached to digital works. The usage rights define how the digital work may be used or further distributed. Usage fees are specified as part of a usage right. The digital works and their usage rights and fees are stored in repositories. The repositories control access to the digital works. Upon determination that the exercise of a usage right requires a fee, the repository generates a fee reporting transaction. Fee reporting is done to a credit server. The credit server collects the fee information and periodically transmits it to a billing clearinghouse.

[56] References Cited

U.S. PATENT DOCUMENTS

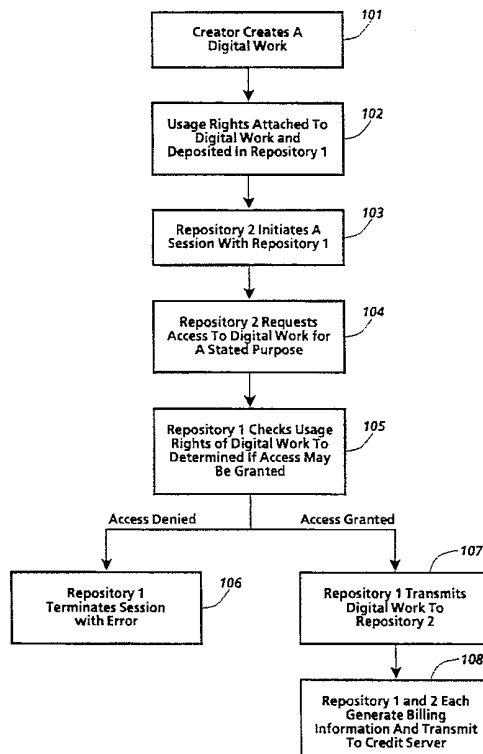
4,529,870	7/1985	Chaum	235/380
4,658,093	4/1987	Hellman	380/25
4,924,378	5/1990	Hershey et al.	364/200
4,932,054	6/1990	Chou et al.	380/4
4,937,863	6/1990	Robert et al.	380/4
4,953,209	8/1990	Ryder, Sr. et al.	380/23
4,961,142	10/1990	Elliott et al.	364/408

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

0332707 9/1989 European Pat. Off. .

16 Claims, 13 Drawing Sheets



U.S. PATENT DOCUMENTS

4,977,594	12/1990	Shear	380/4
5,010,571	4/1991	Katznelson	380/4
5,014,234	5/1991	Edwards, Jr.	364/900
5,023,907	6/1991	Johnson et al.	380/4
5,047,928	9/1991	Wiedemer	364/406
5,050,213	9/1991	Shear	380/25
5,058,164	10/1991	Elmer et al.	380/50
5,103,476	4/1992	Waite et al.	380/4
5,113,519	5/1992	Johnson et al.	395/600
5,146,499	9/1992	Geffroin	380/23
5,159,182	10/1992	Eisele	235/492
5,191,193	3/1993	Le Roux	235/379
5,204,897	4/1993	Wyman	380/4
5,247,575	9/1993	Sprague et al.	380/9
5,291,596	3/1994	Mita	395/600
5,339,091	8/1994	Yamazaki et al.	345/104
5,532,920	7/1996	Hartick et al.	364/419.1

OTHER PUBLICATIONS

- Weber, R., "Metering Technologies For Digital Intellectual Property," *A Report to the International Federation of Reproduction Rights Organizations*, Oct. 1994, pp. 1-29.
- Clark, P.C. and Hoffman, L.J., "Bits: A Smartcard Protected Operating System," *Communications of the ACM*, Nov. 1994, vol. 37, No. 11, pp. 66-70, and 94.
- Ross, P.E., "Data guard", *Forbes*, Jun. 6, 1994, pp. 101.
- Saigh, W.K., "Knowledge is Sacred," *Video Pocket/Page Reader Systems, Ltd.*, 1992.
- Kahn, R.E., "Deposit, Registration And Recordation In An Electronic Copyright Management System," *Corporation for National Research Initiatives*, Virginia, Aug. 1992, pp. 1-19.
- Hilts, P., Mutter, J., and Taylor, S., "Books While U Wait," *Publishers Weekly*, Jan. 3, 1994, pp. 48-50.
- Strattner, A., "'Cash register on a chip' may revolutionize software pricing and distribution; Wave Systems Corp.," *Computer Shopper*, Copyright, Apr. 1994, vol. 14; No. 4; p. 62; ISSN 0886-0556.
- O'Connor, M.A., "New distribution option for electronic publishers; iOpener data encryption and metering system for CD-ROM use; col." *CD-ROM Professional*, Copyright, Mar. 1994, vol. 7; No. 2; p. 134; ISSN: 1049-0833.
- Willett, S., "'Metered PCs: Is your system watching you?"; Wave Systems beta tests new technology,' *InfoWorld*, Copyright, May 2, 1994, p. 84.
- Linn, R.J., "Copyright and Information Services in the Context of the National Research and Education Network¹," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 9-20.
- erritt, Jr., H.H., "Permissions Headers and Contract Law," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 27-48.
- Uptegrove, L., and Roberts, R., "Intellectual Property Header Descriptors: A Dynamic Approach," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 63-66.
- Sirbu, M.A., "Internet Billing Service Design and Prototype Implementation," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 67-80.
- Simmel, S.S., and Godard, I., "Metering and Licensing of Resources: Kala's General Purpose Approach," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 81-110.
- Kahn, R.E., "Deposit, Registration and Recordation in an Electronic Copyright Management System," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 111-120.
- Tygar, J.D., and Bennet, Y., "Dyad: A System for Using Physically Secure Coprocessors," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 121-152.
- Griswold, G.N., "A Method for Protecting Copyright on Networks," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 169-178.
- Nelson, T.H., "A Publishing and Royalty Model for Networked Documents," *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 257-259.
- Press Release From Electronic Publishing Resources, Inc. (EPR) entitled "National Semiconductor and EPR Partner for Information Metering/Data Security Cards", dated Mar. 4, 1994.
- Weber, R., "Digital Rights Management Technology", Oct. 1995.

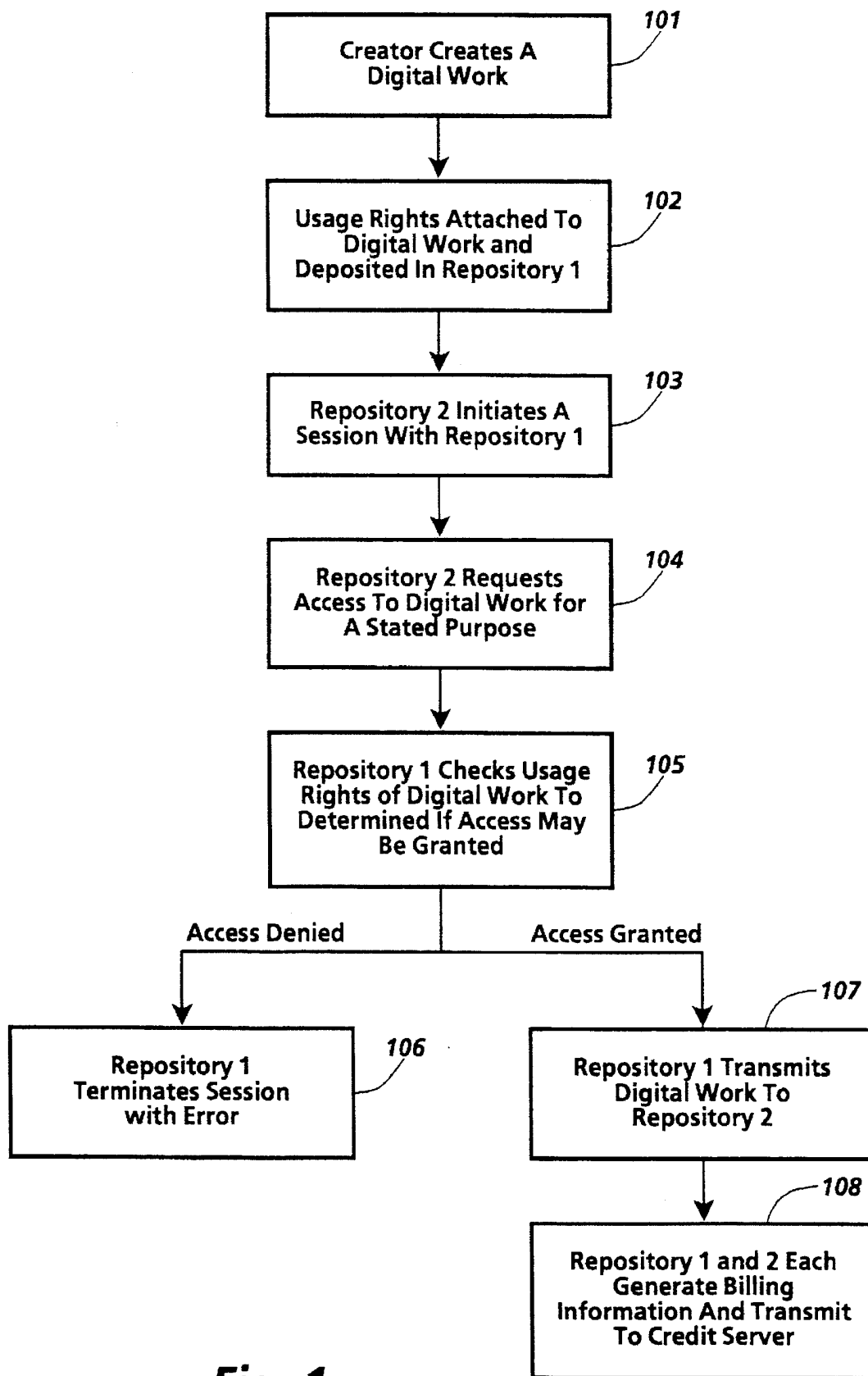


Fig. 1

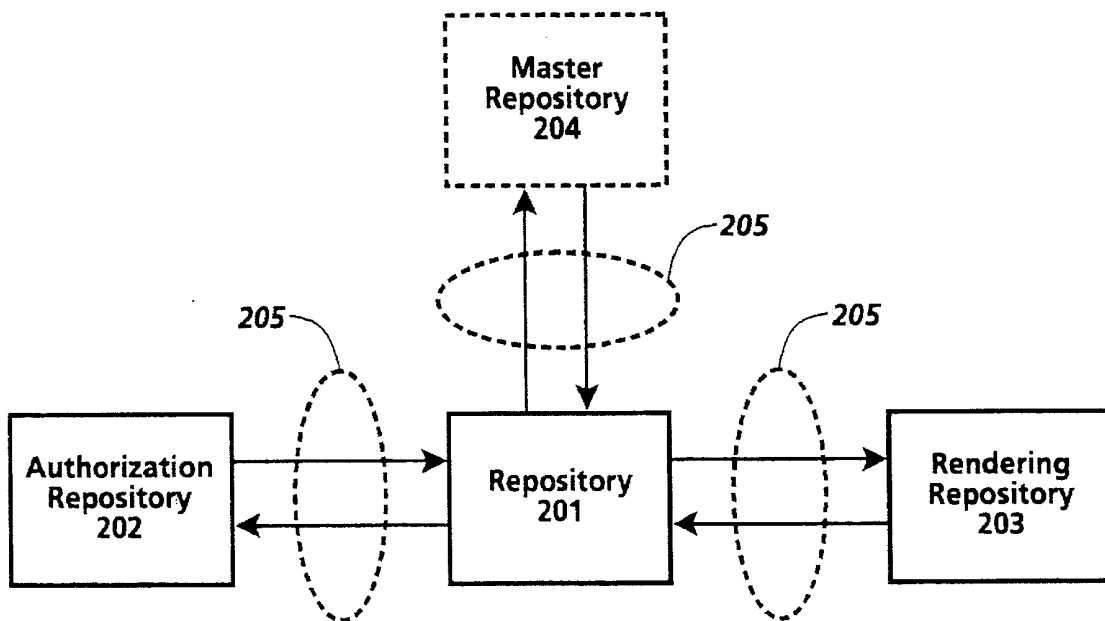


Fig. 2

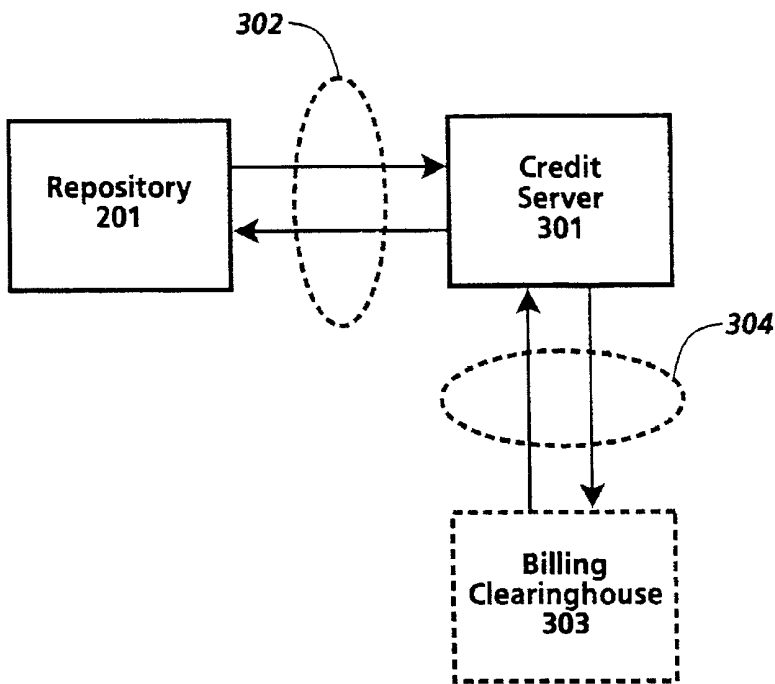


Fig. 3

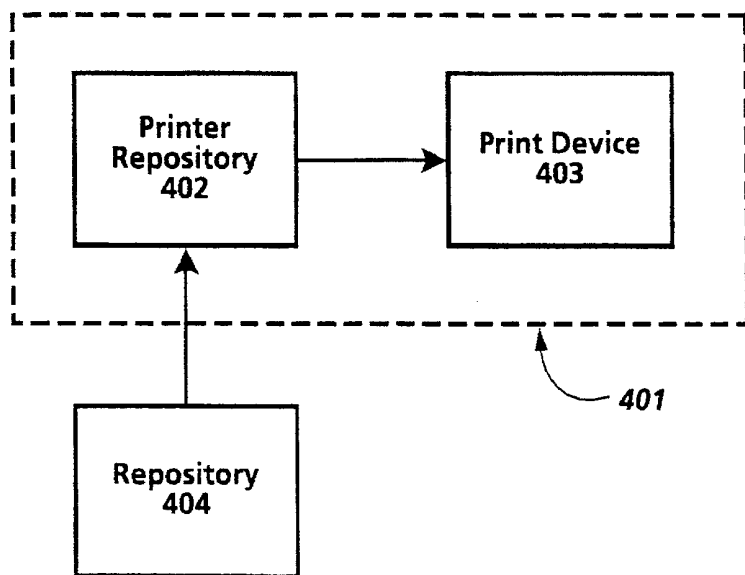


Fig. 4a

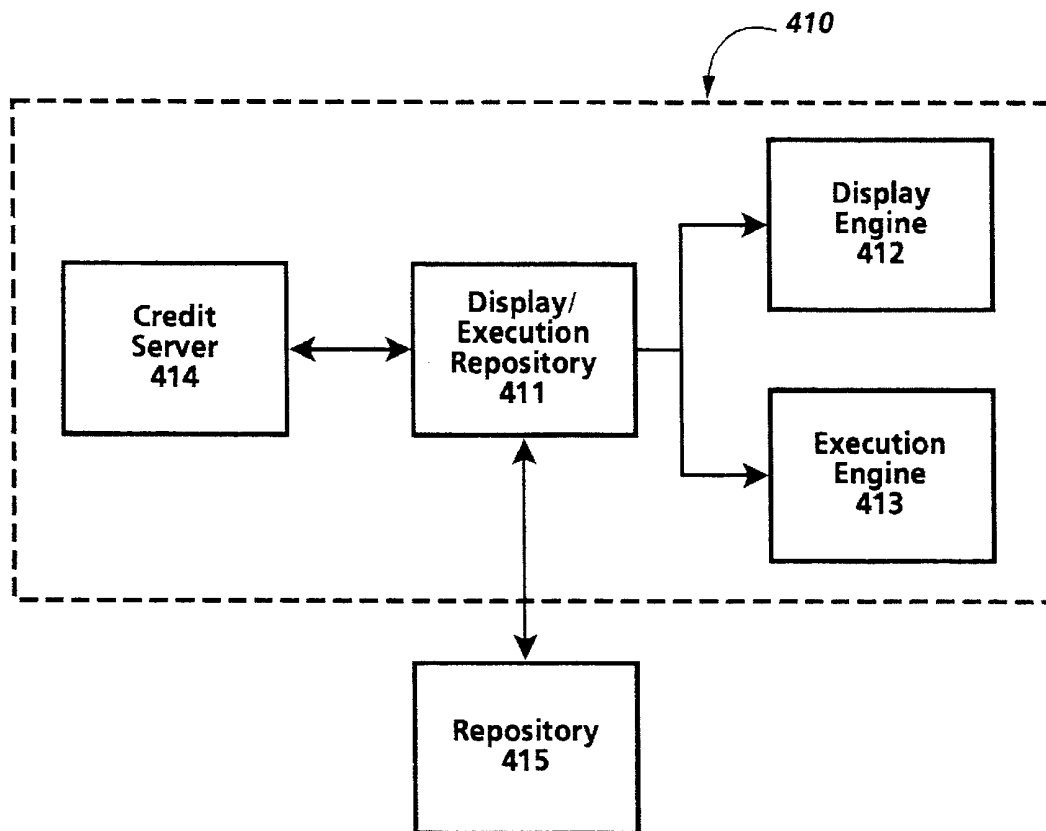


Fig. 4b

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.