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

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[22] Filed: Nov. 23, 1994

364/40

[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. .

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

OTHER PUBLICATIONS

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.

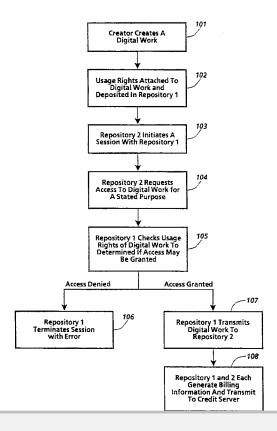
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[57] ABSTRACT

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.

16 Claims, 13 Drawing Sheets





U.S. PATENT DOCUMENTS

4,977,594	12/1990	Shear
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	Geffrotin
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	Hartrick 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.

Upthegrove, 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.

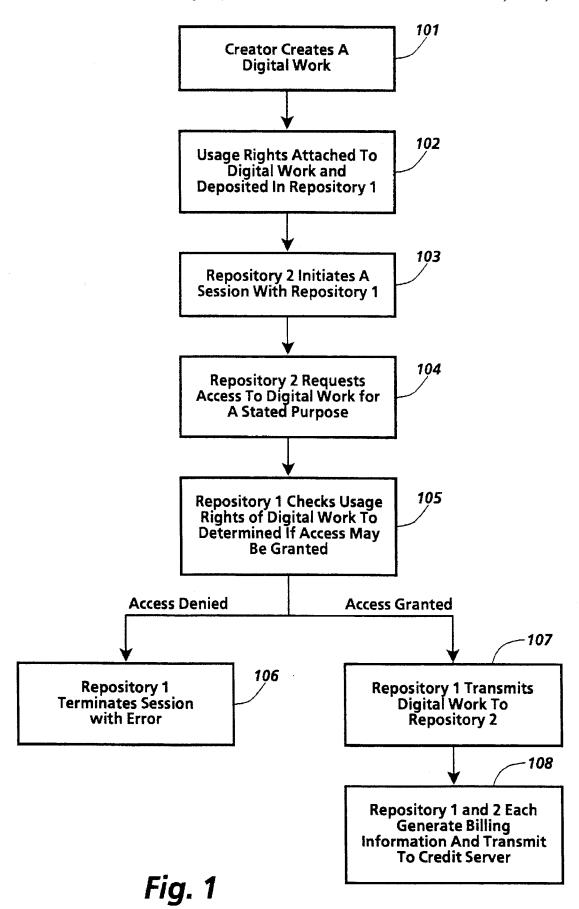
Tygar, J.D., and Bennet, Y., "Dyad: A System for Using Physically Secure Coprocessors." *IMA Intellectual Property Project Proceedings*, Jan. 1994, vol. 1, Issue 1, pp. 121–152. Griswold, G.N., "A Method for Protecting Copyright on Networks," *IMA Intellectual Property Project Proceedings*, Jan. 1994, 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.







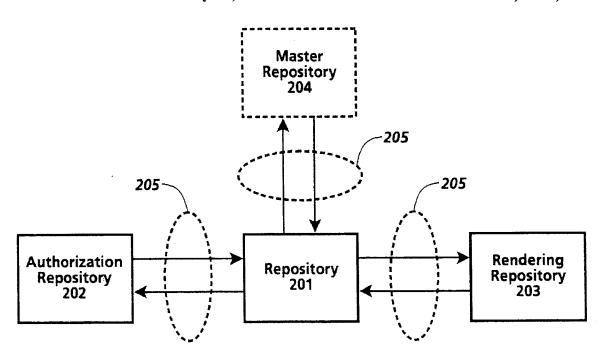


Fig. 2

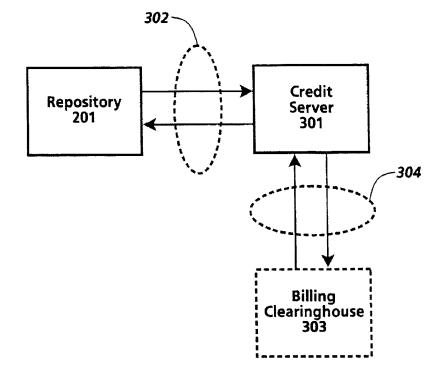


Fig. 3



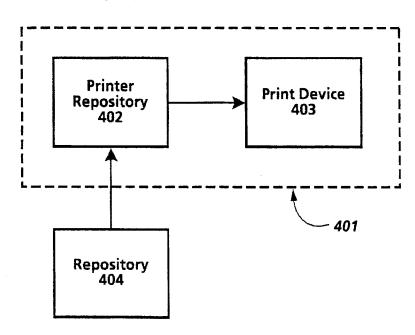


Fig. 4a

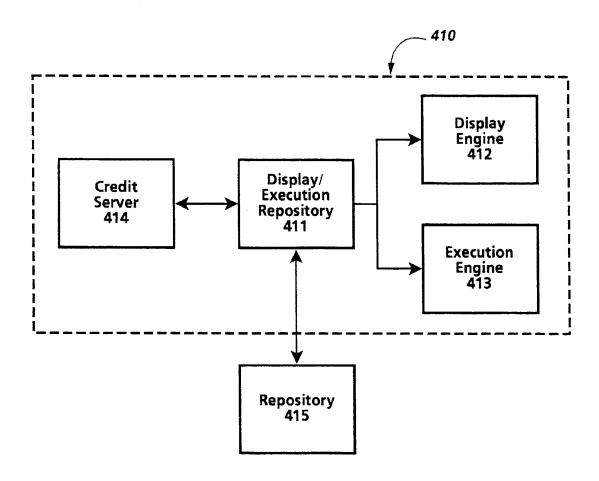


Fig. 4b



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