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Stefik et al.

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[54] **SYSTEM FOR CONTROLLING THE DISTRIBUTION AND USE OF DIGITAL WORKS**

Weber, R., "Digital Rights Management Technology", Oct. 1995.

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European Search Report for Corresponding European Application 95308420.9.

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

(List continued on next page.)

[21] Appl. No.: **344,042**

Primary Examiner—Salvatore Cangialosi

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

Attorney, Agent, or Firm—Richard B. Domingo

[51] Int. Cl.⁶ **H04L 9/00**

[57] ABSTRACT

[52] U.S. Cl. **380/4**

A system for controlling use and distribution of digital works. In the present invention, the owner of a digital work attaches usage rights to that work. Usage rights are granted by the "owner" of a digital work to "buyers" of the digital work. The usage rights define how a digital work may be used and further distributed by the buyer. Each right has associated with it certain optional specifications which outline the conditions and fees upon which the right may be exercised. Digital works are stored in a repository. A repository will process each request to access a digital work by examining the corresponding usage rights. Digital work playback devices, coupled to the repository containing the work, are used to play, display or print the work. Access to digital works for the purposes of transporting between repositories (e.g. copying, borrowing or transfer) is carried out using a digital work transport protocol. Access to digital works for the purposes of replay by a digital work playback device (e.g. printing, displaying or executing) is carried out using a digital work playback protocol.

[58] Field of Search 380/4; 235/380

[56] References Cited

U.S. PATENT DOCUMENTS

| | | | |
|-----------|--------|----------------|---------|
| 3,263,158 | 7/1966 | Janis | 380/4 |
| 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 |

(List continued on next page.)

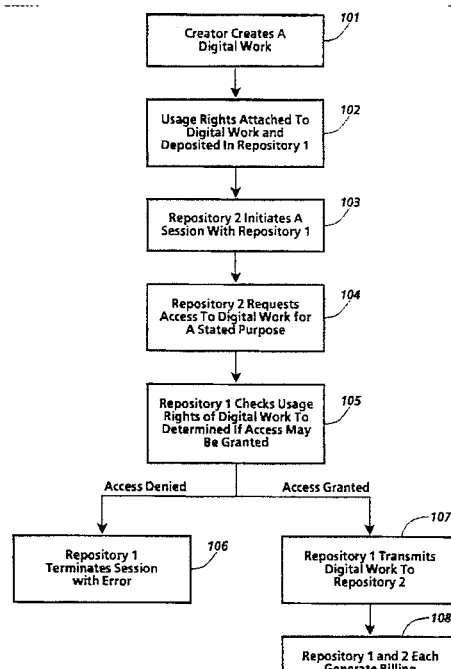
FOREIGN PATENT DOCUMENTS

| | | | |
|-----------|---------|--------------------|------------|
| 0332707 | 9/1989 | European Pat. Off. | |
| 2236604 | 4/1991 | United Kingdom | |
| WO9220022 | 11/1992 | WIPO | |
| 9301550 | 1/1993 | WIPO | G06F 11/34 |

OTHER PUBLICATIONS

Press Release From Electronic Publishing Resources, Inc. (EPR) entitled "National Semiconductor and EPR Partner for Information Metering/Data Security Cards", dated Mar. 4, 1994.

31 Claims, 13 Drawing Sheets



U.S. PATENT DOCUMENTS

| | | | |
|-----------|---------|-------------------|---------|
| 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 |
| 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 |
| 5,235,642 | 8/1993 | Wobber et al. | 380/4 |
| 5,247,575 | 9/1993 | Sprague et al. | 380/9 |
| 5,260,999 | 11/1993 | Wyman | 380/4 |
| 5,263,157 | 11/1993 | Janis | 380/4 |
| 5,291,596 | 3/1994 | Mita | 395/600 |
| 5,339,091 | 8/1994 | Yamazaki et al. | 345/104 |
| 5,432,849 | 7/1995 | Johnson et al. | 380/4 |
| 5,438,508 | 8/1995 | Wyman | 380/4 |
| 5,504,814 | 4/1996 | Miyahara | 380/4 |
| 5,530,235 | 7/1996 | Stefik et al. | 235/380 |

OTHER PUBLICATIONS

- 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.
- 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, p. 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'Conner, M.A., "New distribution option for electronic publishers; iOpener data encryption and metering system for CD-ROM use; Column." *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.

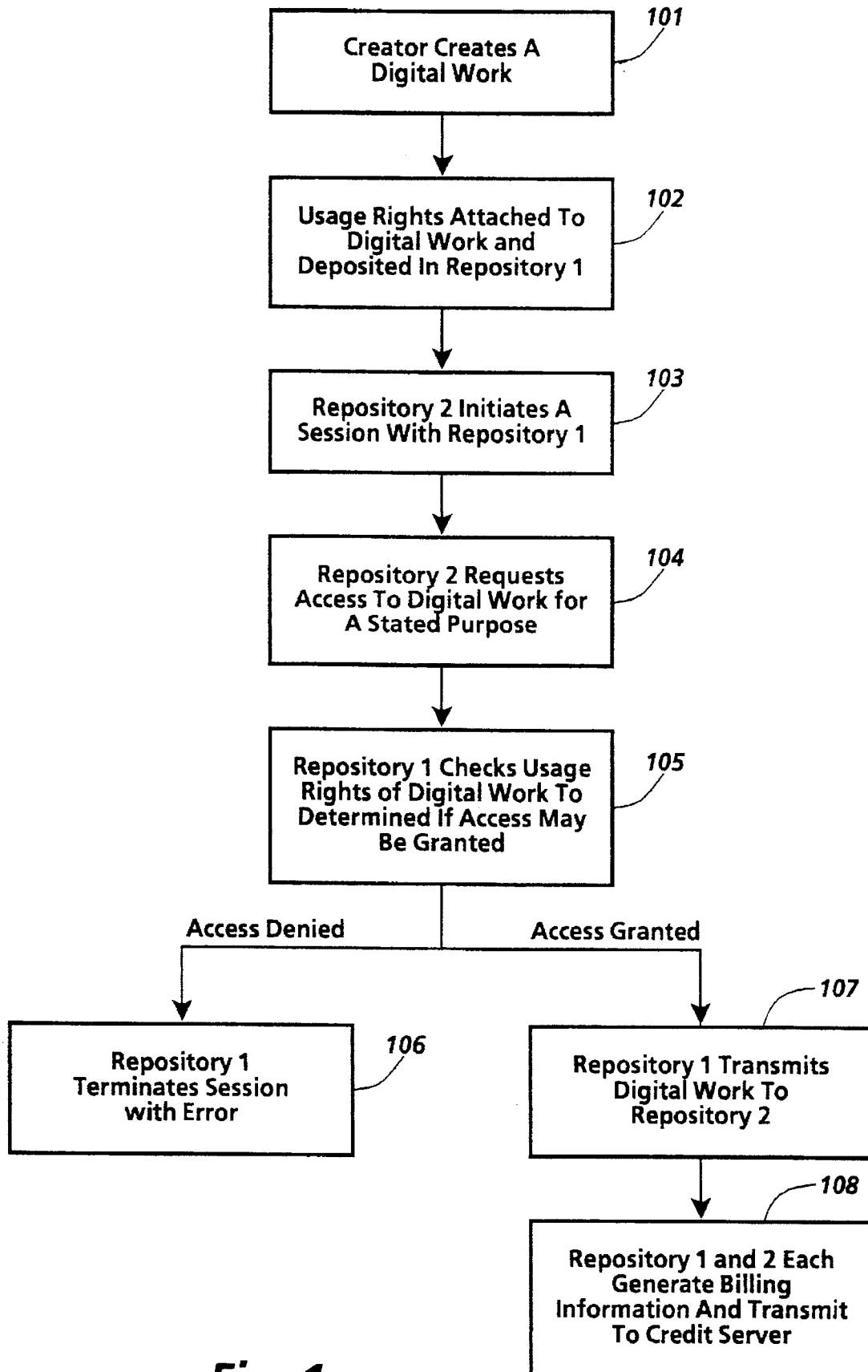


Fig. 1

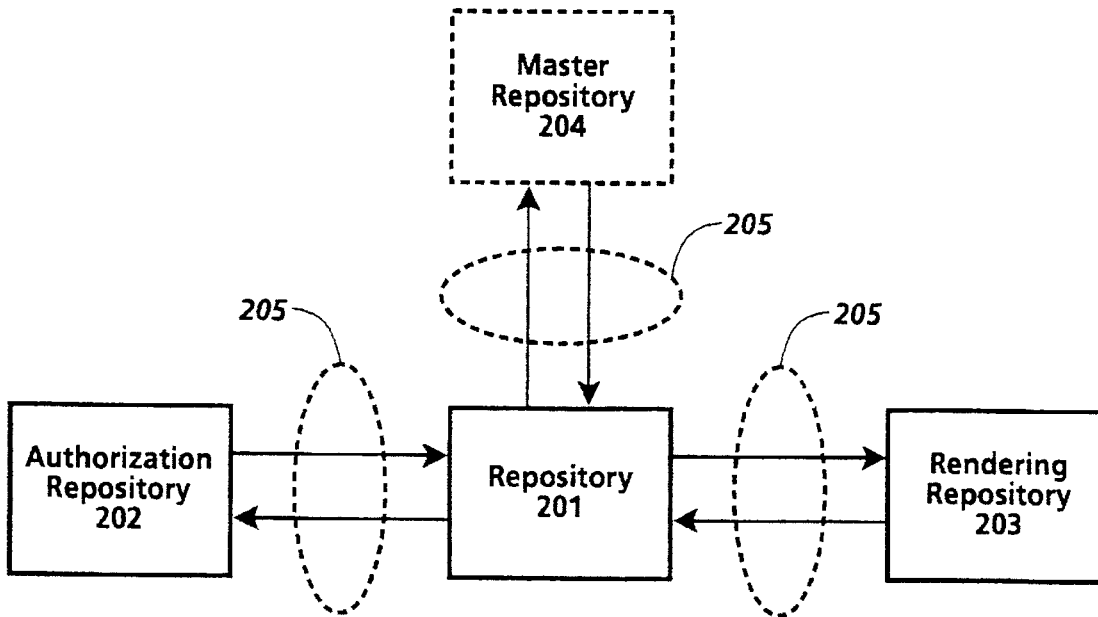


Fig. 2

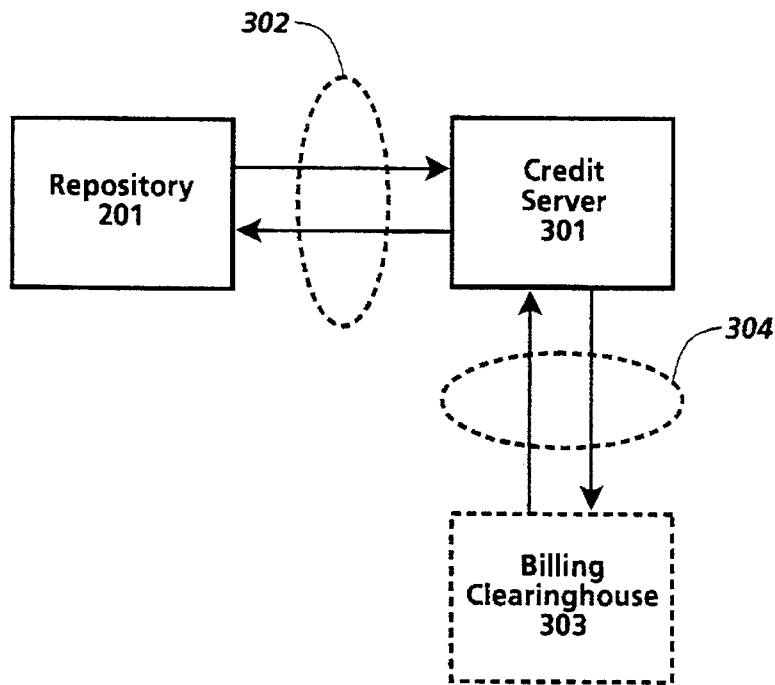


Fig. 3

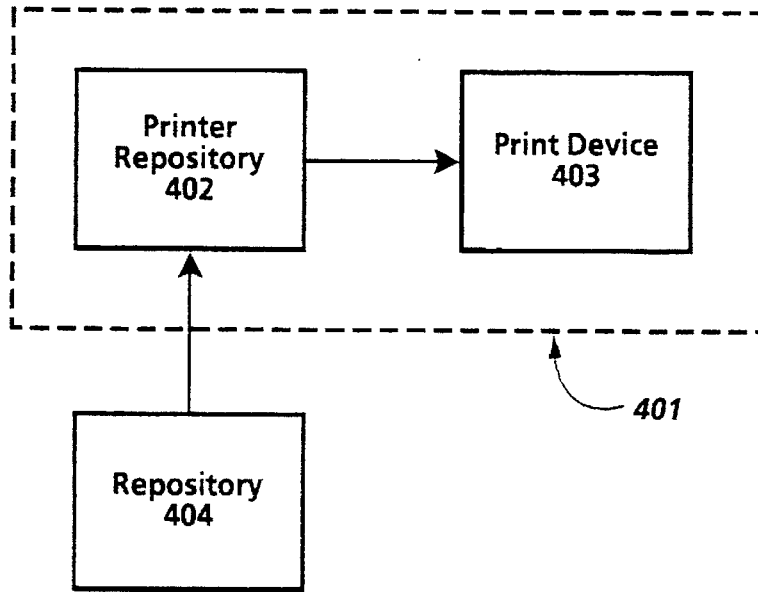


Fig. 4a

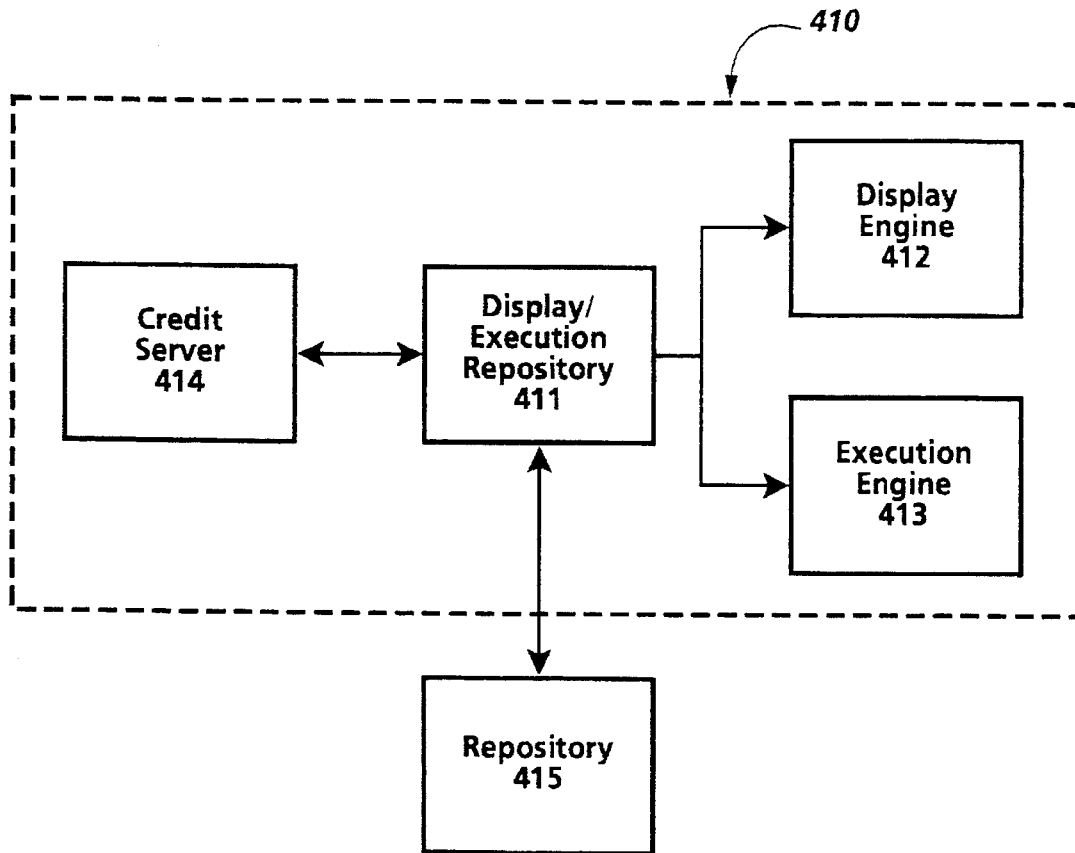


Fig. 4b

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