

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number
WO 2004/034197 A3

(51) International Patent Classification⁷: **G06F 12/00**,
12/08, 12/16

(21) International Application Number:
PCT/US2003/031641

(22) International Filing Date: 7 October 2003 (07.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/416,717 7 October 2002 (07.10.2002) US
60/416,699 7 October 2002 (07.10.2002) US

(71) Applicant (for all designated States except US): **COM-
MVAULT SYSTEMS, INC.** [US/US]; 2 Crescent Place,
Oceanport, NJ 07757 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ANAND, Prahlad**
[US/US]; 3 Bucknell Drive, East Brunswick, NJ 08816
(US). **NGO, David** [US/US]; 152 Dorchester Way,
Shrewsbury, NJ 07702 (US). **NORMAN, Lunde, R.**
[US/US]; 6 Brasch Boulevard, Middletown, NJ 07748

(US). **LIXIN, Zhou** [CN/US]; 225 Plum Drive, Marlboro,
NJ 07746 (US). **AVINASH, Kumar** [IN/US]; 901 Collins
Avenue, #3B, Ocean, NJ 07712 (US). **ANDREAS, May**
[US/US]; 1 Carter Drive, Marlboro, NJ 07746 (US).

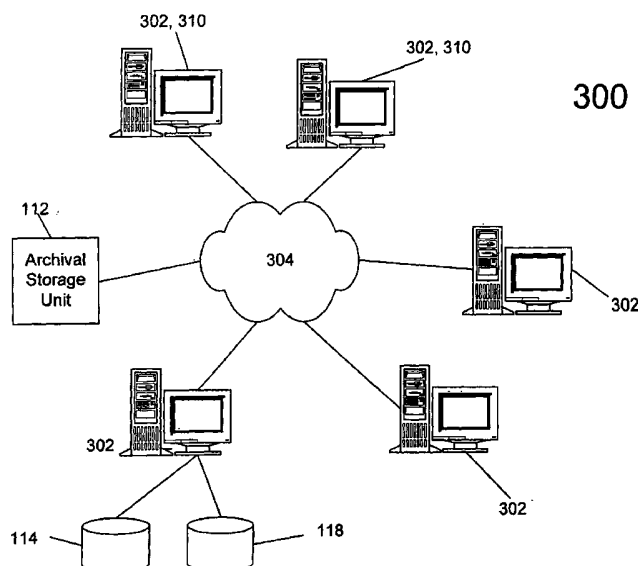
(74) Agent: **STEVEN, Rubin, S.**; Brown Raysman Millstein
Felder & Stein LLP, 900 Third Avenue, New York, NY
10022 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR MANAGING STORED DATA



(57) Abstract: A system and method of managing stored data in a storage management system. The storage management system includes a storage manager, a media agent connected to the storage manager, and a primary volume connected to the media agent. A plurality of snapshots are taken of the primary volume. The snapshots are indexed by associating respective information with the snapshot. The indexed snapshots are copied to a recovery volume. In this way, browsing features are enabled for the user. The user may view the snapshots in a hierarchical format, and may even view snapshot data in association with the corresponding application. The resultant recovery volume may be used to replace a primary volume.



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:

10 June 2004

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/31641

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 12/00 12/08 12/16

US CL : 711/162

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 711/162;709/221

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,269,431 (DUNHAM) 31 July 2001 (31.07.2001), column 1, line 60 through column 2, lines 45; column 5, line 57 through column 7, line 54; column 14, line 66 through column 15, line 54.	1-17
Y	US 6,076,148(KEDEM) 13 June 2000 (13.06.2000), entire document.	1-17
Y	US 6,195,695 (CHESTON et al) 27 February 2001 (27.02.2001), entire document.	1-17



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

30 March 2004 (30.03.2004)

Date of mailing of the international search report

20 APR 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Mano Padmanabhan

Telephone No. 703-305-9600

INTERNATIONAL SEARCH REPORT

PCT/US03/31641

Continuation of B. FIELDS SEARCHED Item 3:

USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM_TDB

search terms: backup, near, version, near, multiple, or, different, and, 711/161-162.ccls.