

(12) **United States Patent**
Cox et al.

(10) **Patent No.:** US 6,510,466 B1
(45) **Date of Patent:** Jan. 21, 2003

(54) **METHODS, SYSTEMS AND COMPUTER PROGRAM PRODUCTS FOR CENTRALIZED MANAGEMENT OF APPLICATION PROGRAMS ON A NETWORK**

(75) Inventors: **David E. Cox**, Raleigh, NC (US); **Kent F. Hayes, Jr.**, Chapel Hill, NC (US); **David B. Lindquist**, Raleigh, NC (US); **John R. McGarvey**, Apex, NC (US); **Abdi Salahshour**, Raleigh, NC (US)

(73) Assignee: **International Business Machines Corporation**, Armonk, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/211,528**

(22) Filed: **Dec. 14, 1998**

(51) **Int. Cl.**⁷ **G06D 13/00**
(52) **U.S. Cl.** **709/229; 709/223**
(58) **Field of Search** **709/223, 203, 709/219, 229; 710/3, 129, 31**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,263,165 A	11/1993	Janis	395/725
5,440,739 A	8/1995	Beck et al.	70/221
5,554,979 A	9/1996	Kohar et al.	340/825.72
5,634,010 A	* 5/1997	Ciscon et al.	709/223
5,655,081 A	* 8/1997	Bonnell et al.	709/202
5,680,615 A	10/1997	Marlin et al.	707/103
5,689,709 A	11/1997	Regnier et al.	709/302
5,708,709 A	* 1/1998	Rose	380/4
5,745,879 A	4/1998	Wyman	705/1
5,748,896 A	5/1998	Daly et al.	709/223
5,764,887 A	6/1998	Kells et al.	713/200
5,771,354 A	6/1998	Crawford	709/229
5,778,368 A	7/1998	Hogan et al.	707/10
5,809,251 A	* 9/1998	May et al.	709/223
5,813,009 A	9/1998	Johnson et al.	707/100
5,845,077 A	12/1998	Fawcett	709/221

5,848,243 A	12/1998	Kulkarni et al.	709/224
5,875,327 A	2/1999	Brandt et al.	713/1
5,881,236 A	3/1999	Dickey	709/221
5,911,066 A	6/1999	Williams et al.	709/300
5,933,601 A	* 8/1999	Fanshift et al.	709/223
6,070,190 A	5/2000	Reps et al.	709/224

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

WO 9850853 11/1998 G06F/9/44

OTHER PUBLICATIONS

“A Common Desktop Environment for Platforms Based on the UNIX Operating System,” By B.E. Cripe, J.A. Brewster, and D.E. Laursen, Hewlett-Packard Journal, vol. 47, No. 2, Apr. 1, 1996, pp. 6-14.

(List continued on next page.)

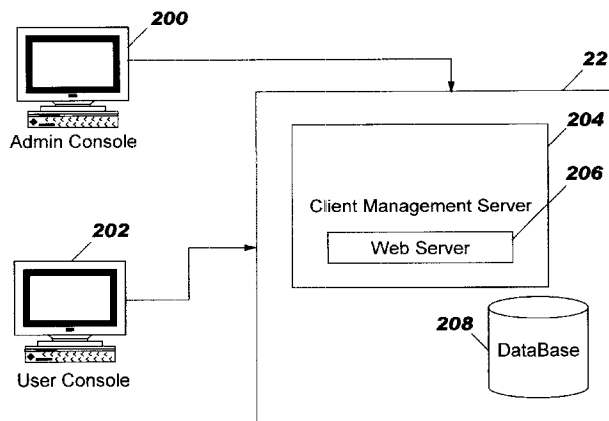
Primary Examiner—David Wiley

(74) Attorney, Agent, or Firm—Myers Bigel Sibley & Sajovec; Jeanine S. Ray-Yarletts

(57) **ABSTRACT**

Methods, systems and computer program products for management of application programs on a network including a server supporting client stations are provided. The server provides applications on-demand to a user logging in to a client supported by the server. Mobility is provided to the user and hardware portability is provided by establishing a user desktop interface responsive to a login request which presents to the user a desktop screen through a web browser interface which accesses and downloads selected application programs from the server responsive to a request from the user on the user desktop screen at the client. The application program is then provided from the server and executed at the client. The application program may further be customized to conform to the user's preferences and may also provide for license use management by determining license availability before initiating execution of the application program. Finally, software distribution and installation may be provided from a single network management server.

42 Claims, 9 Drawing Sheets



U.S. PATENT DOCUMENTS

6,098,067	A *	8/2000	Erickson	707/10
6,105,063	A *	8/2000	Hayes, Jr.	709/223
6,105,066	A	8/2000	Hayes, Jr.	709/226
6,105,069	A	8/2000	Franklin et al.	709/229
6,108,712	A	8/2000	Hayes, Jr.	709/246
6,115,040	A *	9/2000	Bladow et al.	345/335
6,158,010	A *	12/2000	Moriconi et al.	713/201
6,175,363	B1	1/2001	Williams et al.	345/334
6,175,832	B1	1/2001	Luzzi et al.	707/10
6,182,142	B1 *	1/2001	Win et al.	709/229
6,189,051	B1 *	2/2001	Oh et al.	710/33
6,192,414	B1	2/2001	Horn	709/239
6,195,432	B1 *	2/2001	Takanashi et al.	380/9
6,202,206	B1 *	3/2001	Dean et al.	717/11

OTHER PUBLICATIONS

“Administration of Graphic User Interface and Multimedia Objects Using Cooperating Processing,” IBM Technical Disclosure Bulletin, vol. 37, No. 9, Sep. 1, 1994, pp. 675–678.

http://nf/pdc97/profiles_and_policies.htm “Guide to Microsoft Windows NT 4.0 Profiles and Policies” pp 1–76.

<http://www.ietf.org/html.charters/acap-charter.html> “Application Configuration Access Protocol (acap),” 68 pages.

IBM Network Station Manager for Windows NT Server 4.0, Chapter 5. Using the IBM Network Station Manager, pp. 5–1 to 5–15.

<http://www.software.ibm.com/os/warp/library/sq202822.htm>, “WorkSpace on-Demand Handbook,” Chapters 2.3.1; 6.2; 6.3; 6.3.1; 6.3.3; 6.5.

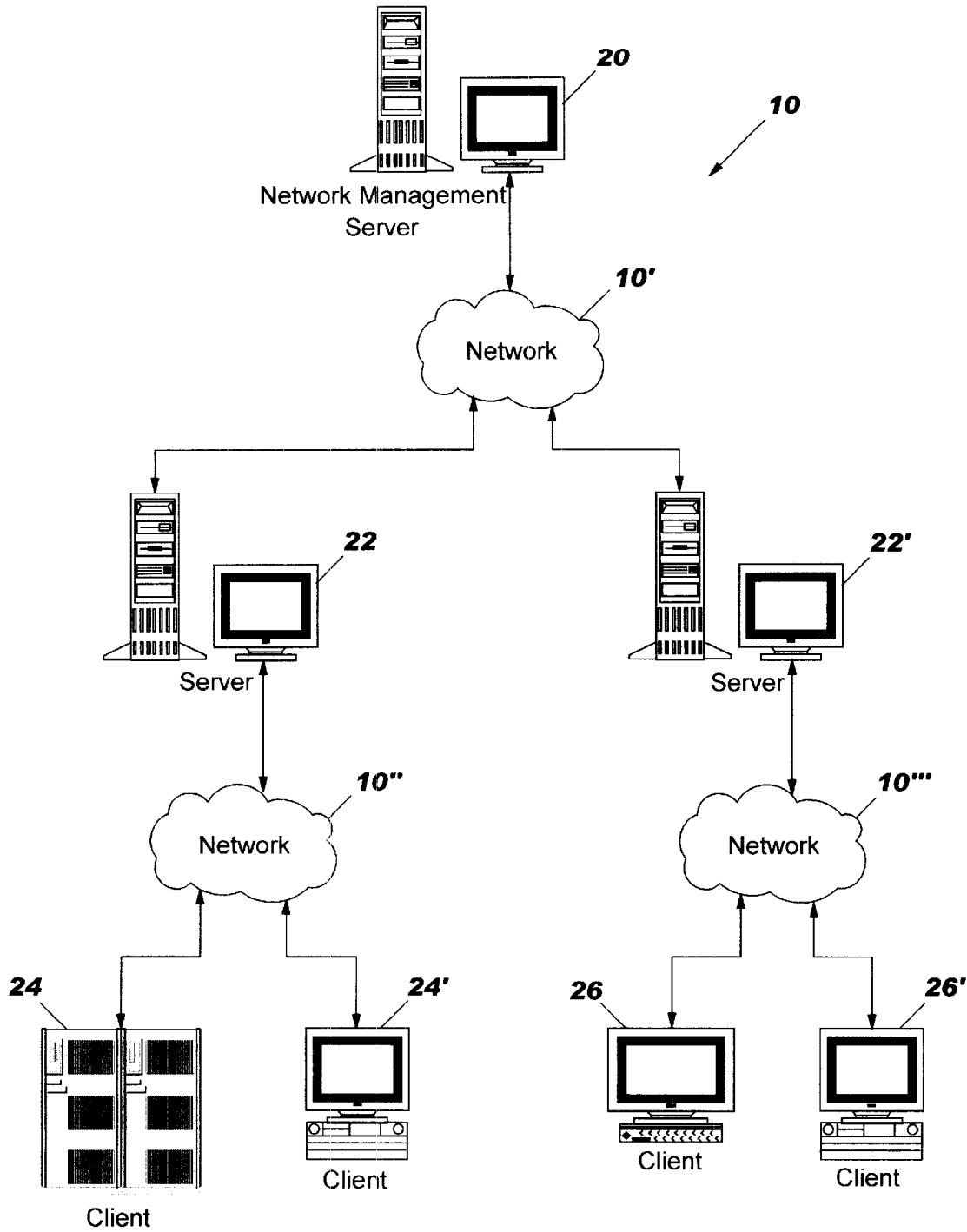
<http://www.triteal.com/SoftNC>, Java Desktop Environment from Triteal, pp 1–2.

<http://java.sun.com/products/hot-javaviews/admin.html>, “HotJava Views,” pp 1–24.

<http://esuite.lotus.com/eSuite/eSuite>, “The Right Work Environment for Network Centric Computing,” 24 pages.

* cited by examiner

FIG. 1



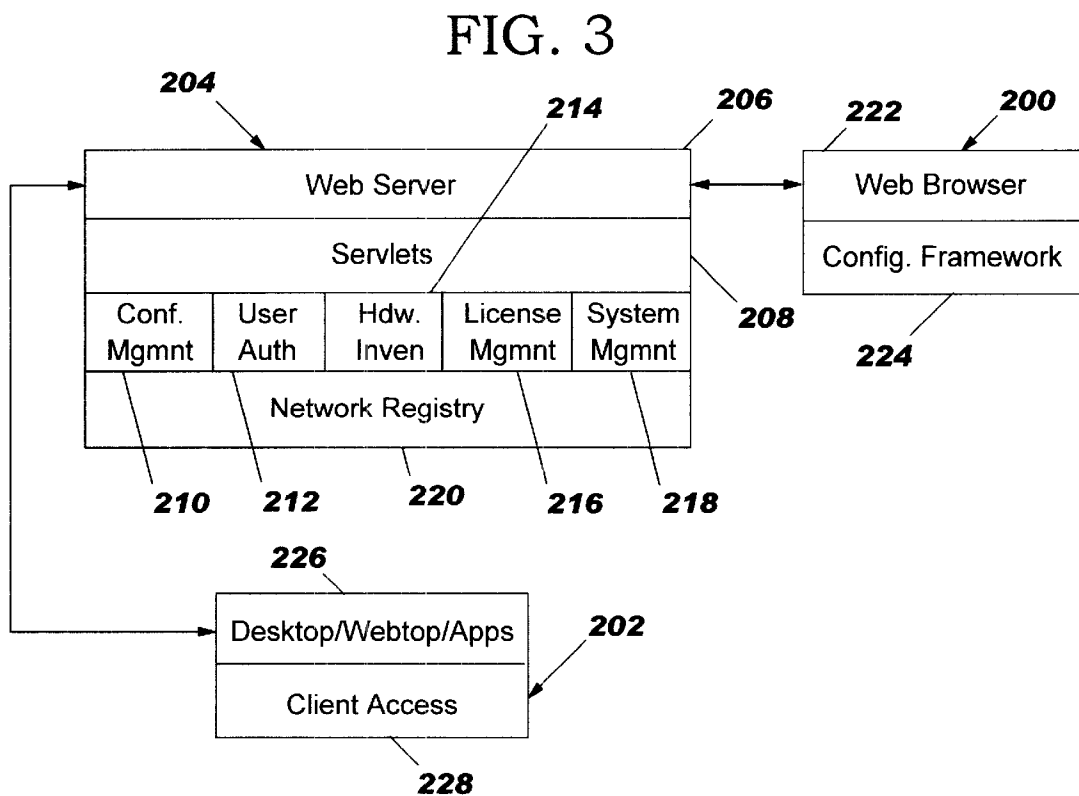
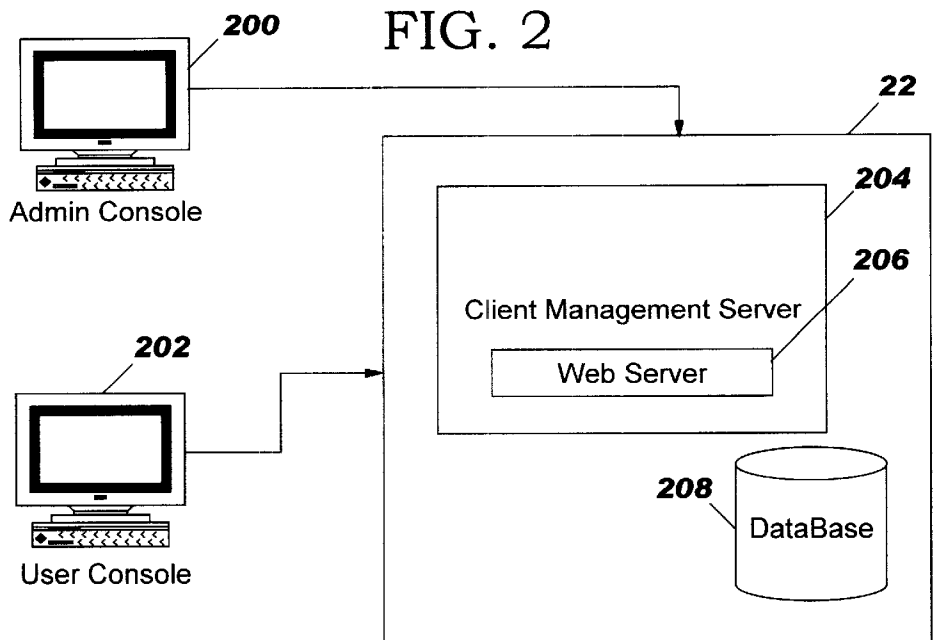
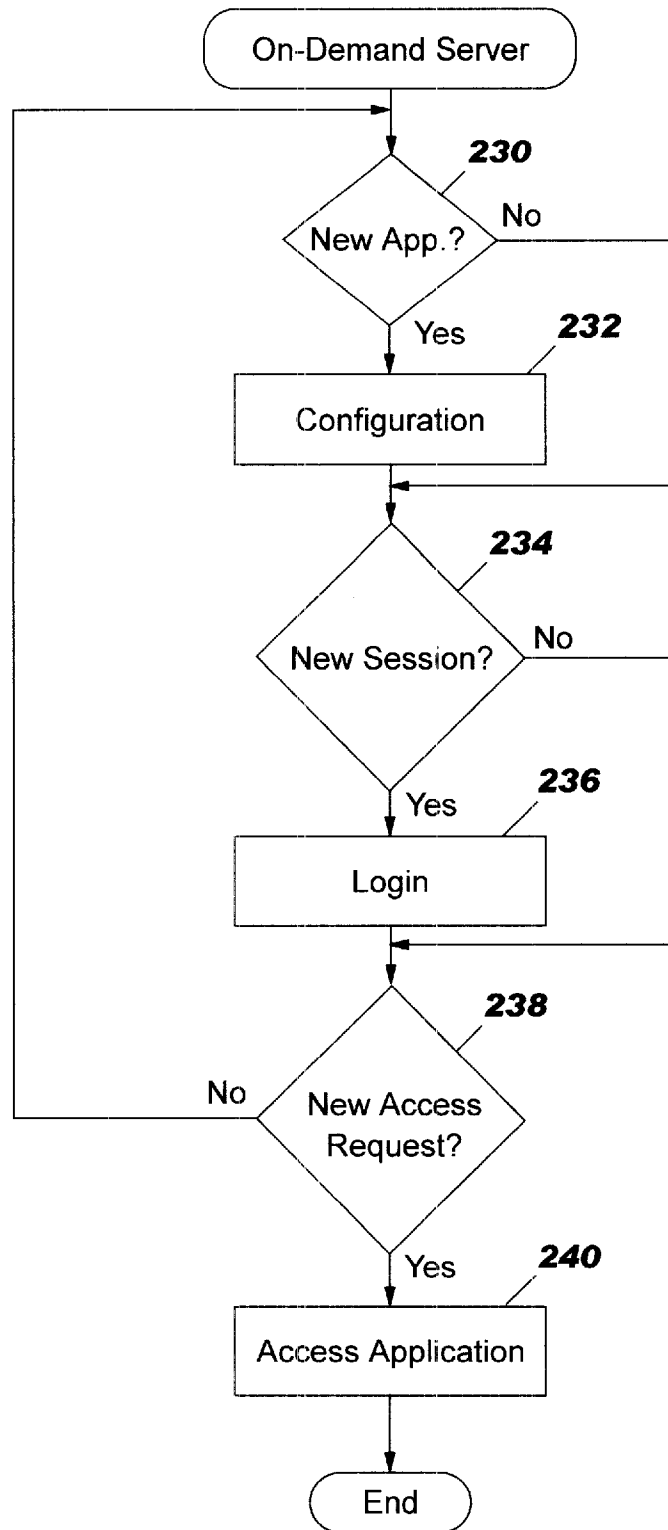


FIG. 4



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.